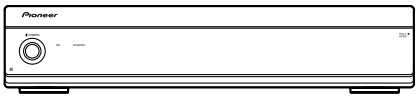
Pioneer sound.vision.soul

Service Manual



PDP-R05G

ORDER NO.
PROVISIONAL

MEDIA RECEIVER

PDP-R05G

THIS MANUAL IS APPLICABLE TO THE FOLLOWINGMODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-R05G	TLDPFR	AC110-240V	

Please connect it to the PLASMA DISPLAY PDP-505PG or PDP-435PG for adjustment and operation inspection.

For details, refer to "Important Check Points for Good Servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2004**

T-ZZK NOV. 2004 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

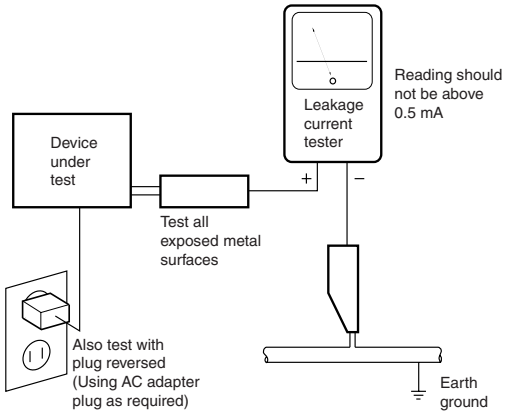
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Leakage current tester
Reading should not be above 0.5 mA
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

Item			Media Receiver, Model: PDP-R05G
Color System			PAL/SECAM/NTSC/4.43 NTSC//PAL-M/PAL-N
TV Function	Receiving System		PAL: B/G, D/K, I, M, N SECAM: B/G, D/K NTSC: M 4.43NTSC: M
	Tuner	VHF/UHF	44.25-863.25 MHz
		CATV	Hyper-band, S1–S41ch
	Auto Channel Preset		99 ch (Normal), 68 ch (Air, US type), 125 ch (Cable, US type), Auto Preset
	Audio multiplex		NICAM/A2/BTSC System
Terminals	Rear	INPUT 1	COMPONENT VIDEO in, S-VIDEO in, AV in
		INPUT 2	SS-VIDEO in, AV in
		INPUT 3	COMPONENT VIDEO in, S-VIDEO in, AV in, HDMI in
		Antenna	75 Ω Din Type for VHF/UHF in
	Front	INPUT 4	S-VIDEO, AV in
		PC	15 Pin mini D-Sub, Audio in
MONITOR OUTPUT Terminal (Rear)			S-VIDEO out, AV out
Power Requirement			110-240 V ~ , 50/60 Hz, 35 W (0.4 W Standby)
Dimensions			420 (W) × 90 (H) × 295 (D) mm
Weight			4.9 kg

• Design and specifications are subject to change without notice.

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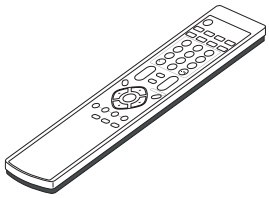
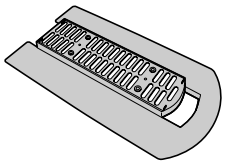
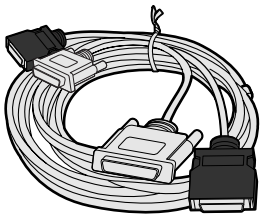
• Accessories



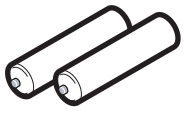
Remote control unit (AXD1492)



Stand (AXG1013)

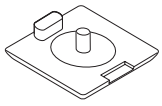


System cable (3 m) (ADF1026)

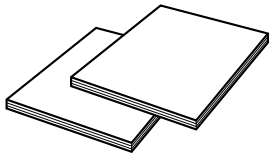


AA size battery x 2 (Manganese battery) (VEM1031)

Screw x 4 (PMB40P120FZK) (for stand)



Screw hole cap x 4 (AMR3363)

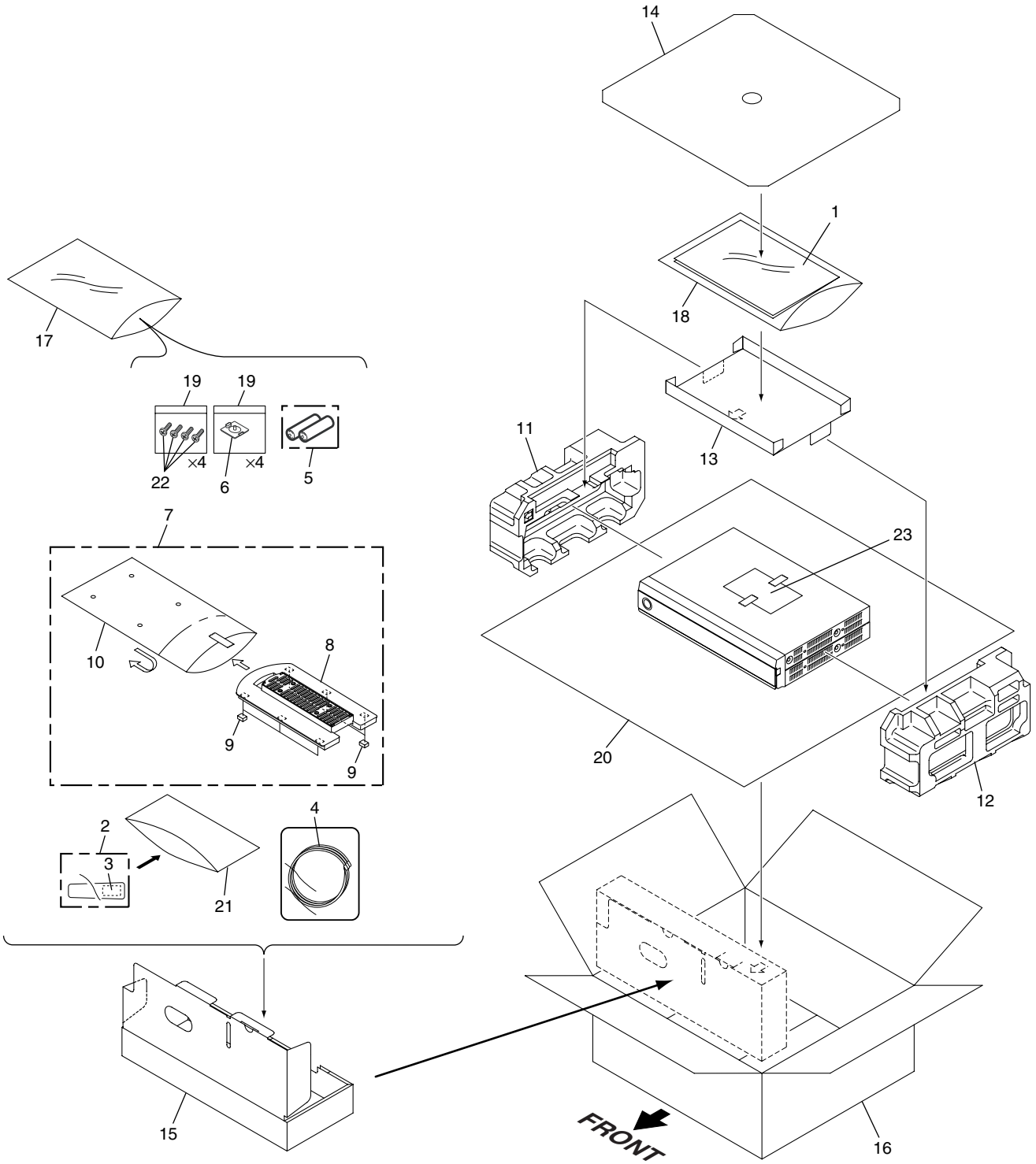


Operating instructions

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

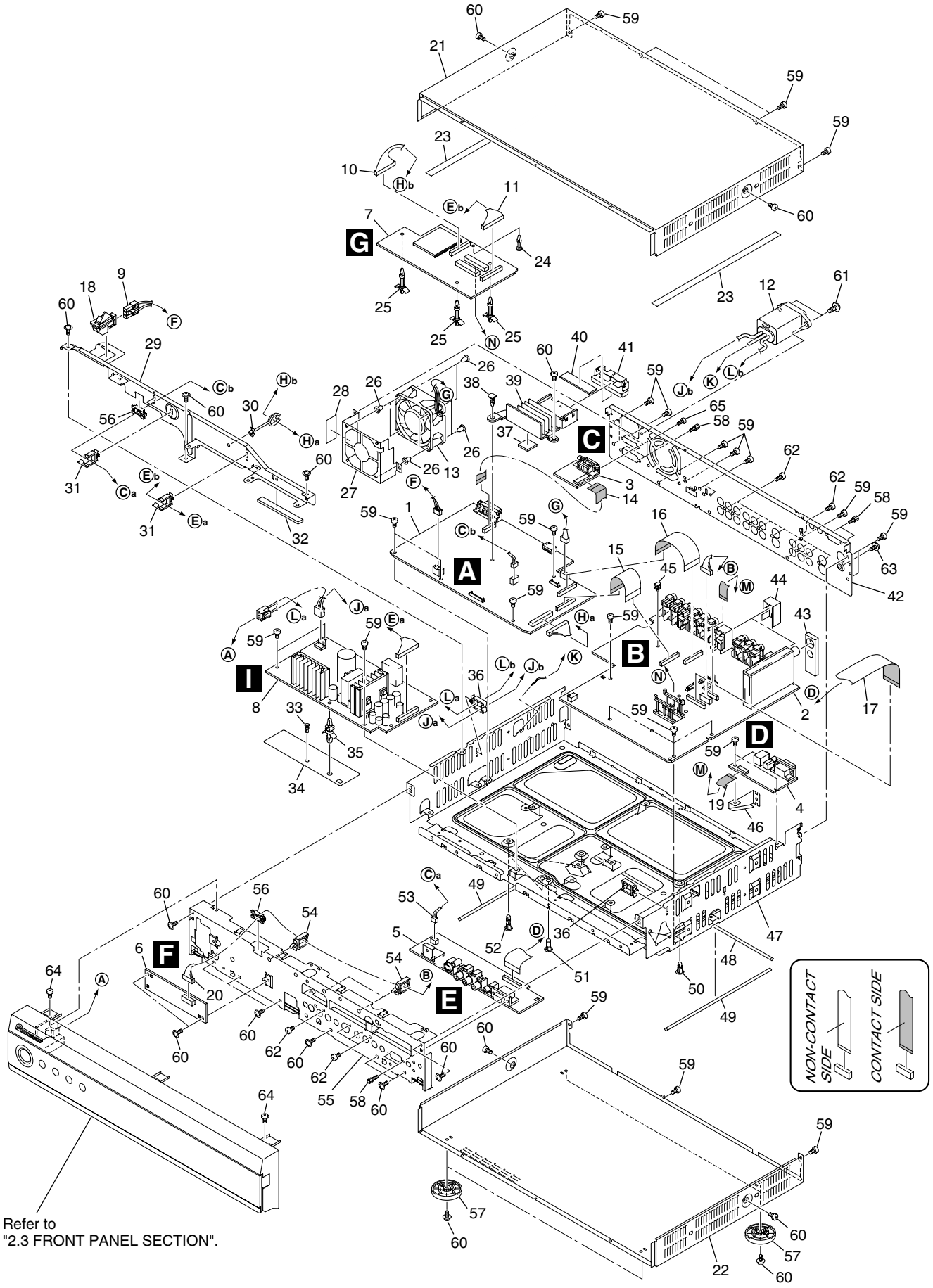
2.1 PACKING SECTION



PACKING SECTION Parts List

Mark	No.	Description	Part No.
	1	Operating Instructions (English/Chinese/Spanish/Portguese)	ARE1384
	2	Remote Control Unit	AXD1492
	3	Battery Cover	AZA7424
	4	System Cable (3m)	ADF1026
NSP	5	Dry Cell Battery (LR6/AA)	VEM1031
	6	Screw Hole Cap	AMR3363
	7	Stand Assy	AXG1013
NSP	8	Stand	AMR3352
NSP	9	Stand Cushion	AEB1390
	10	Laminated Sheet Bag	AHG1334
	11	Pad L	AHA2370
	12	Pad R	AHA2371
	13	IM Pad	AHB1253
	14	Top Pad	AHB1256
	15	Accessory Box	AHC1053
	16	Carton G	AHD3249
NSP	17	Literature Bag	AHG1303
	18	Vinyl Bag	AHG1310
	19	Vinyl Bag	AHG1337
	20	Laminated Sheet	AHG1350
	21	Air Capsule Bag	AHG1351
	22	Screw	PMB40P120FTB
	23	Caution Card (10L)	ARM1234

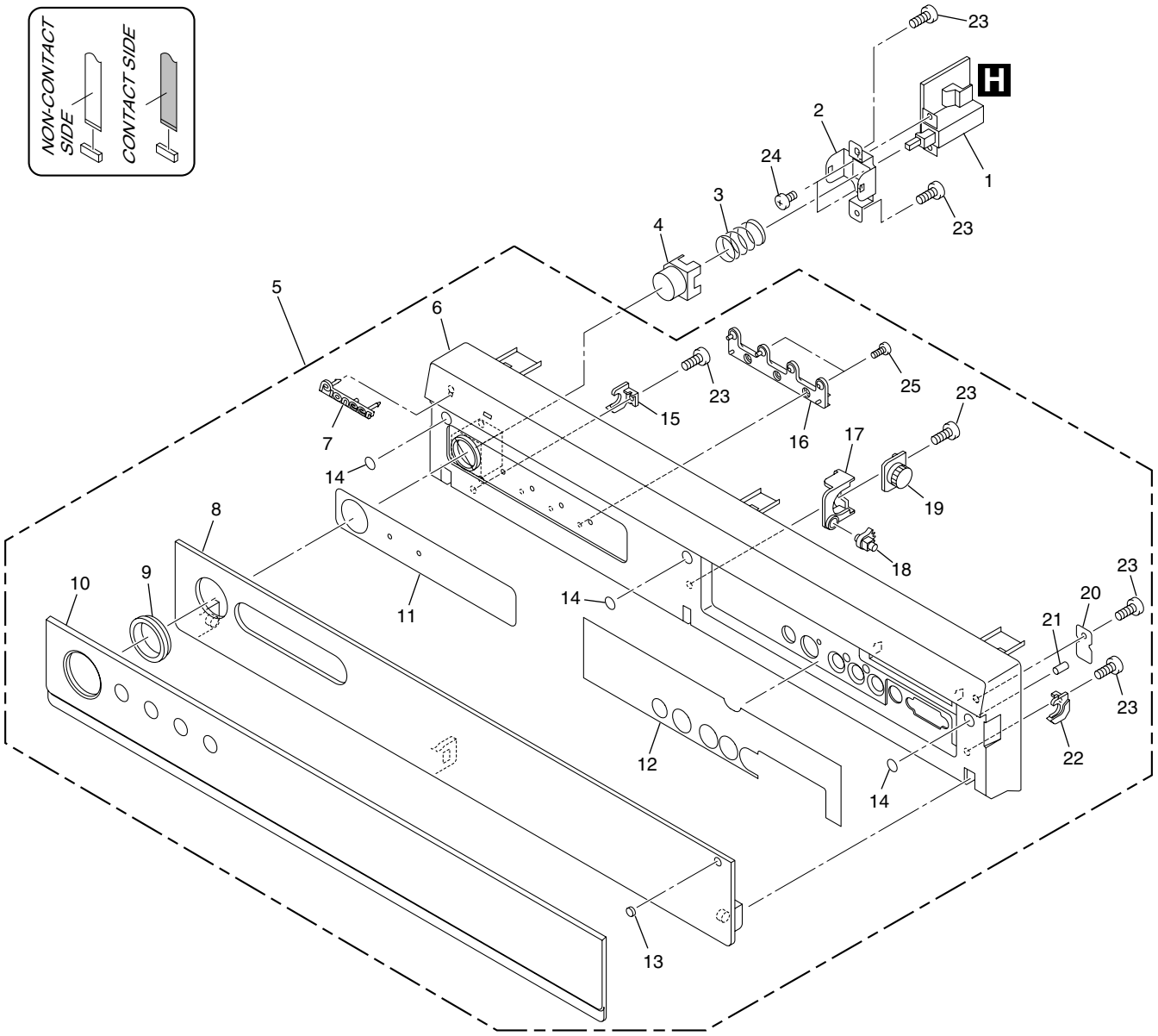
2.2 EXTERIOR SECTION



EXTERIOR SECTION Parts List

Mark	No.	Description	Part No.
	1	MR MAIN BOARD Assy	AWV2157
	2	AV BOARD Assy	AWZ6982
	3	MDR Assy	AWZ6778
	4	SR Assy	AWZ6817
	5	FRONT Assy	AWZ6975
	6	LED Assy	AWZ6816
	7	REG Assy	AWZ6833
⚠	8	POWER SUPPLY Unit	AXY1093
	9	3P Housing Wire (J107)	ADX2836
	10	15P Housing Wire (J105)	ADX2833
	11	16P Housing Wire (J112)	ADX2859
⚠	12	AC Inlet	AKP1257
⚠	13	Fan Motor 60x25L	AXM1045
	14	Flexible Cable (J207)	ADD1214
	15	Flexible Cable (J202)	ADD1209
	16	Flexible Cable (J203)	ADD1210
	17	Flexible Cable (J205)	ADD1212
	18	Power Switch (S1)	ASG1089
	19	Flexible Cable (J206)	ADD1213
	20	7P Housing Wire (J113)	ADX2860
	21	Metal Bonnet Top	ANE1631
	22	Metal Bonnet Bottom	ANE1632
	23	Gasket	ANK1718
	24	Mini Card Spacer	AEC1983
	25	Circuit Board Spacer	AEC1960
	26	Insulation Rubber	AEB1377
	27	Fan Holder	ANG2568
	28	DVI Cushion	AEB1396
	29	Center Stay	ANG2564
	30	HL28	AEC1982
	31	Reuse Clamp	AEC1963
	32	FFC Cushion S	AEB1398
	33	Nylon Rivet	AEC1671
	34	Barrier A	AEC2017
	35	Locking Card Spacer	AEC1429
	36	Reuse Wire Saddle	AEC1945
	37	Silicon Sheet HDMI	AEB1379
	38	Circuit Board Spacer	AEC1964
	39	Heatsink HDMI	ANH1618
	40	Gasket F	ANK1722
	41	HDMI Shield	ANG2646
	42	Terminal Panel G	ANC2365
⚠	43	Gasket	ANK1730
	44	S Shield	ANG2713
	45	Mini Card Spacer	AEC1959
	46	SR Holder	ANG2567
	47	Base Chassis	ANA1811
⚠	48	Gasket	ANK1728
⚠	49	Gasket	ANK1729
	50	Spacer	AEC1256
	51	Card Spacer A	BEC1120
	52	PCB Holder	AEC1097
	53	3P Housing Wire (J108)	ADX2837
	54	Wire Saddle	AEC1745
	55	Front Chassis	ANB1866
	56	Edge Saddle	AEC1946
	57	Leg Assy	AXG1012
	58	Hexagon Head Screw	BBA1051
	59	Screw	BBZ30P060FTB
	60	Screw	ABZ30P080FTC
	61	Screw	AMZ30P080FTC
	62	Screw	BPZ30P100FTB
	63	Screw	AMZ30P060FTB
	64	Screw	ABZ30P060FTB
	65	Screw	PMZ26P060FTB

2.3 FRONT PANEL SECTION



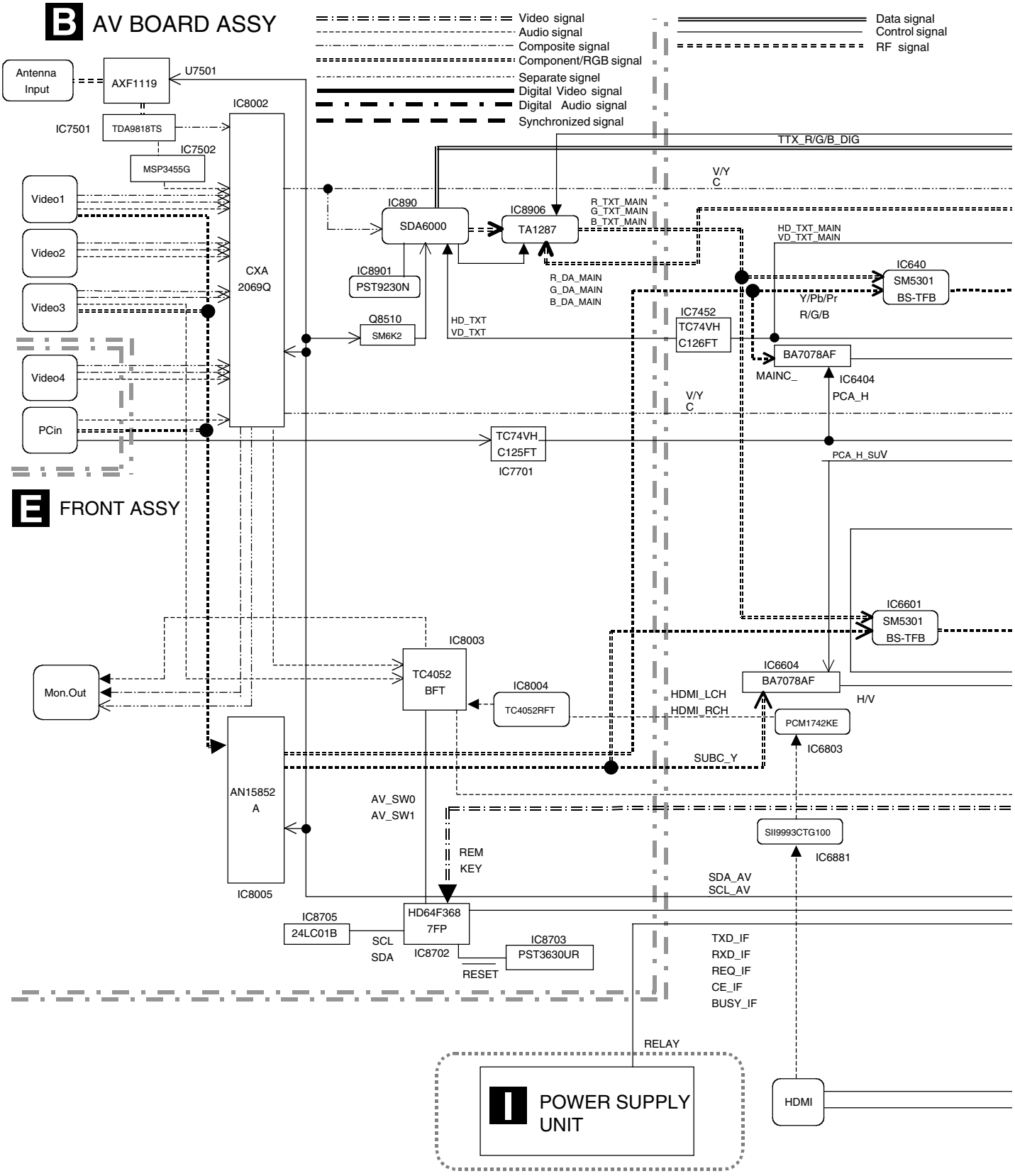
FRONT PANEL SECTION Parts List

Mark	No.	Description	Part No.
	1	AC SW Assy	AWZ6783
	2	SW Holder	ANG2670
	3	SW Spring	ABH1109
	4	Power Button	AAD4128
	5	Front Panel Assy G	AXG1023
	6	Front Panel (G)	AMB2831
	7	Pioneer Badge	VAM1124
	8	Door	AAN1473
	9	Escutcheon Ring	AAD4130
	10	Panel (E)	AAK2826
	11	Sealing Sheet S (GC)	AAL2555
	12	Sealing Sheet (G)	AAL2549
	13	Magnet Catcher	ANG2675
	14	Door Cushion	AEB1391
	15	Door Holder L	AMR3414
	16	LED Lens	AMR3417
	17	Damper Holder	AMR3416
	18	Gear	AMR3418
	19	Damper	AXA1018
	20	Magnet Holder	ANG2671
	21	Magnet	AMF1004
	22	Door Holder R	AMR3415
	23	Screw	BPZ30P100FTB
	24	Screw	BMZ30P060FTC
	25	Screw	JPZ20P035FNI

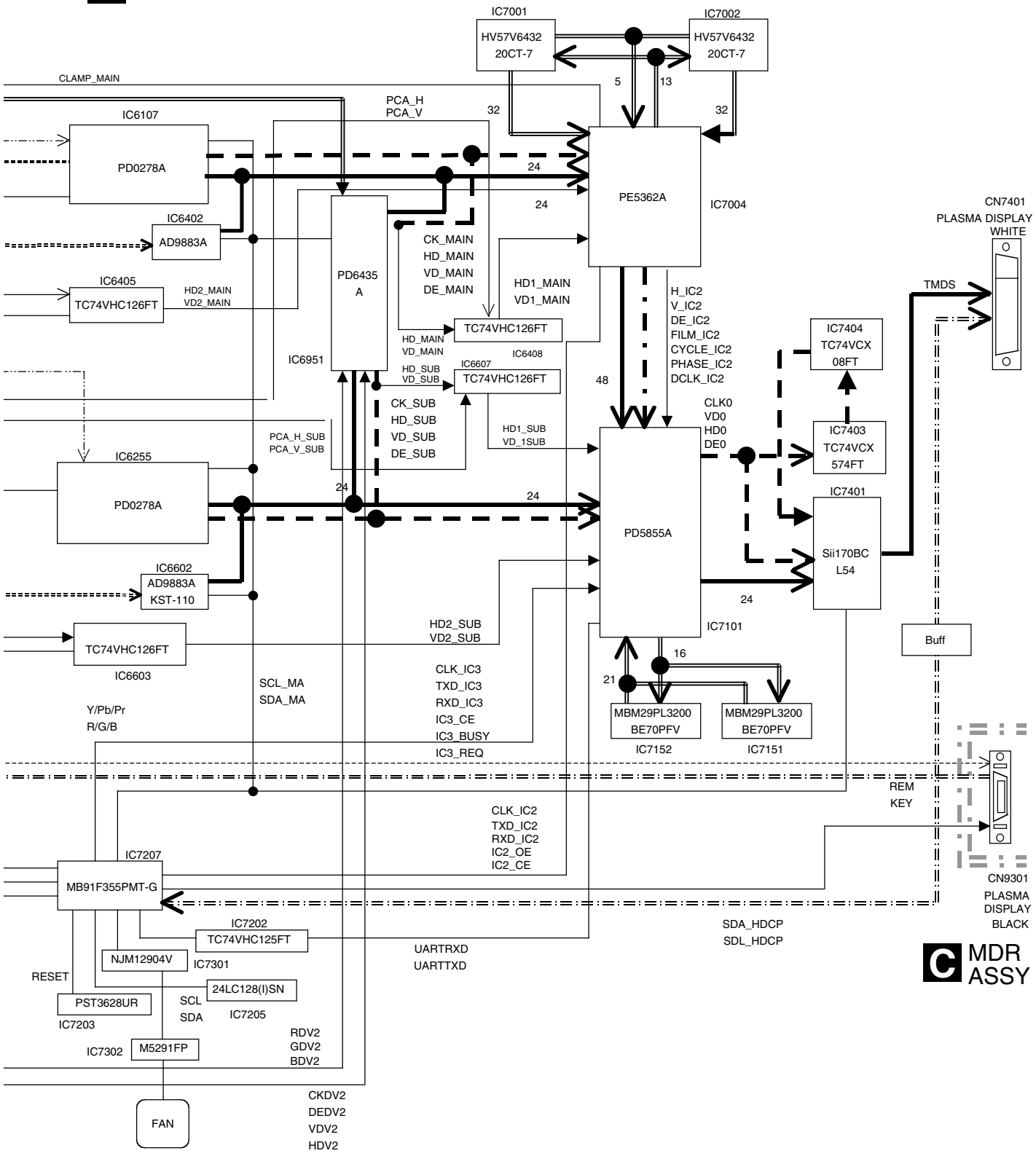
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

3.1.1 SIGNAL ROUTE

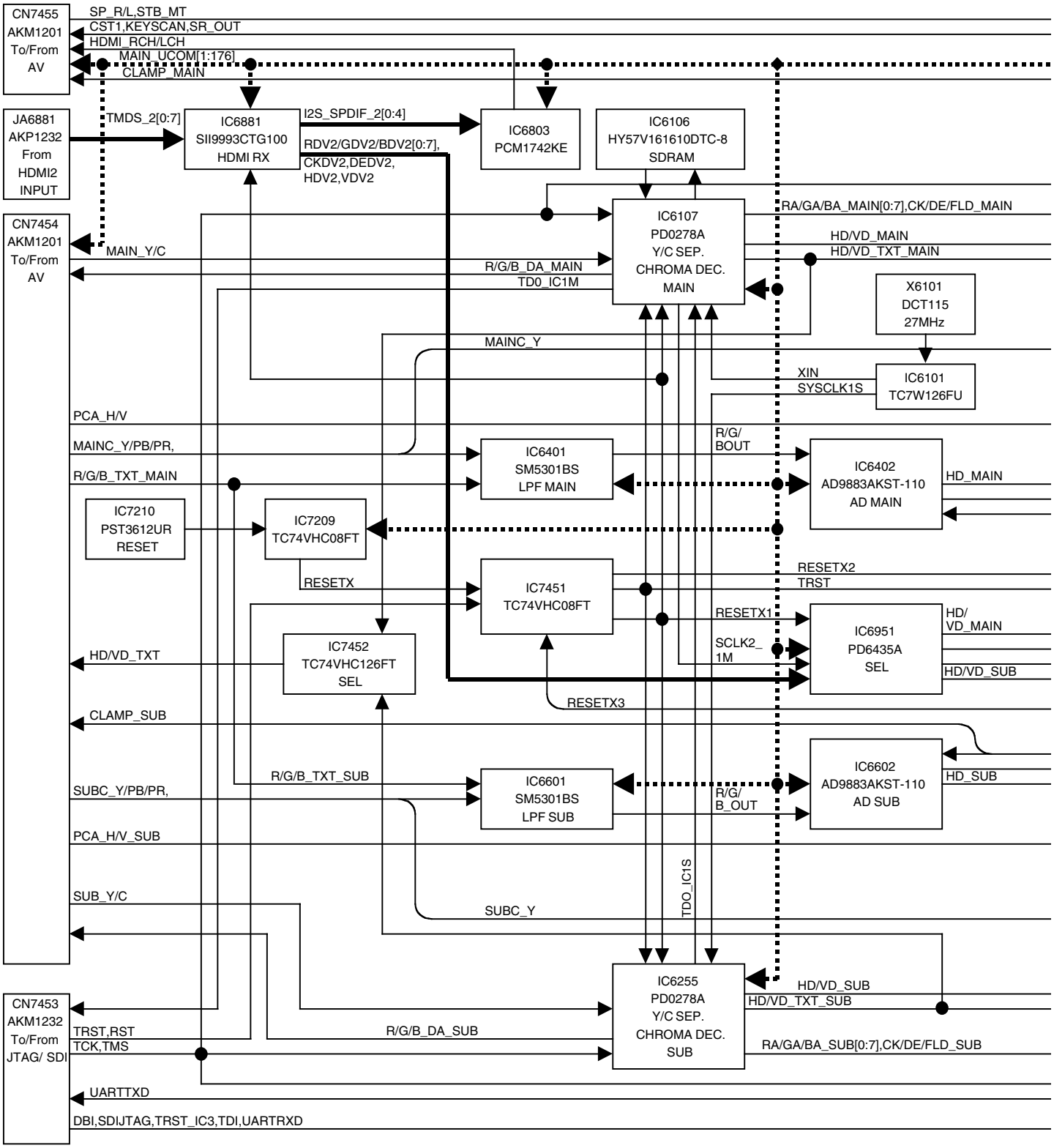


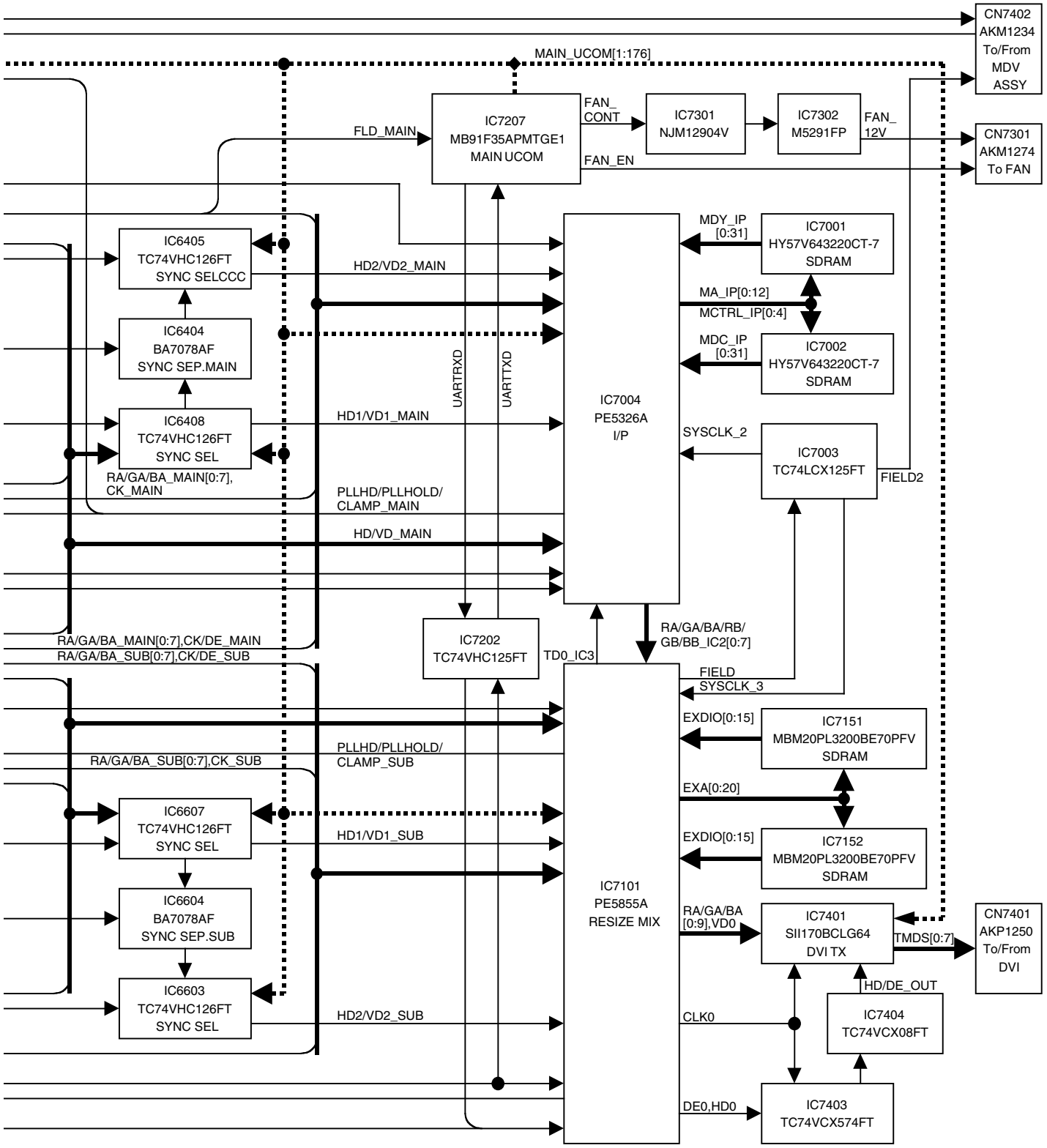
A MR MAIN BOARD ASSY



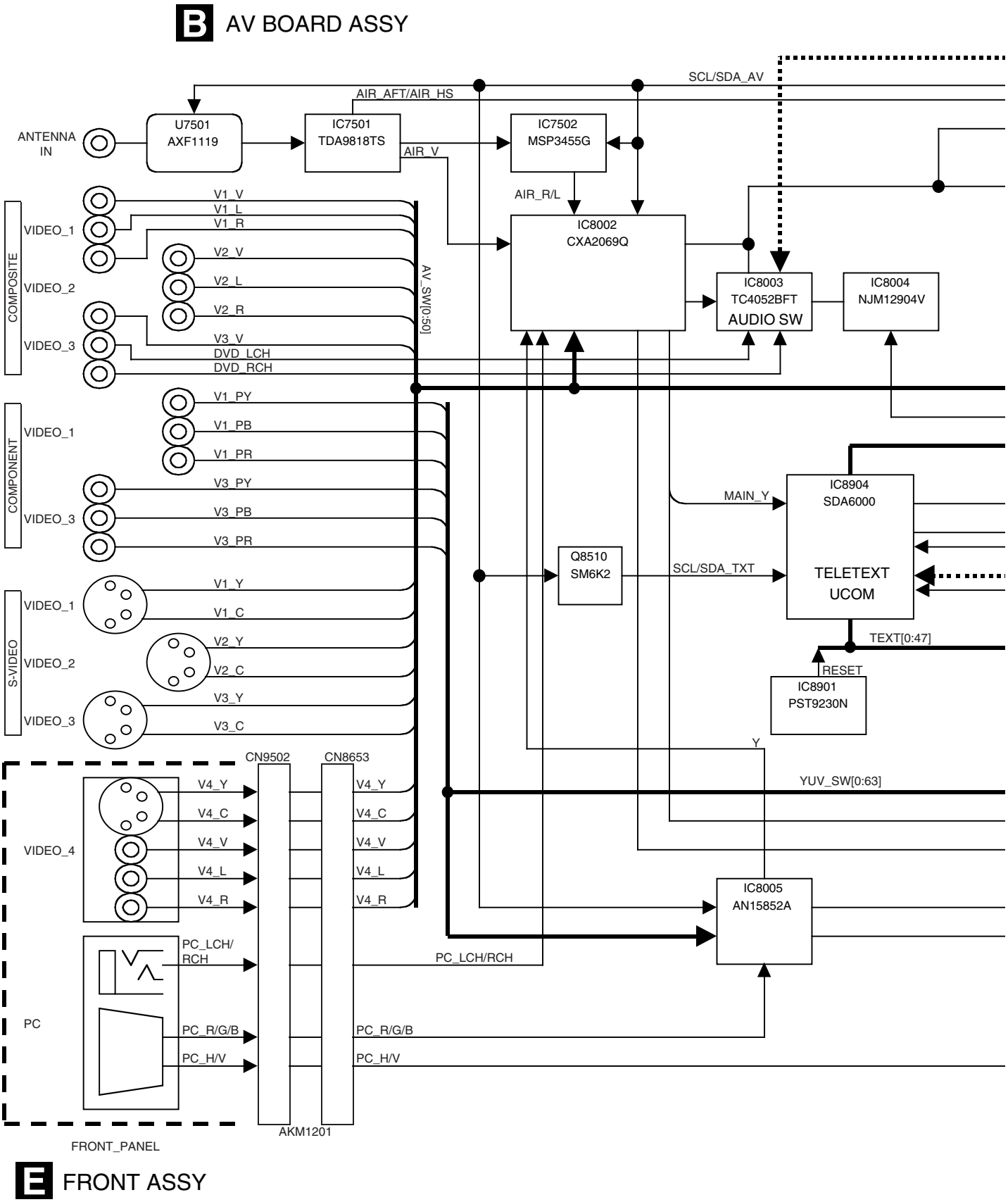
3.1.2 MR MAIN BOARD ASSY

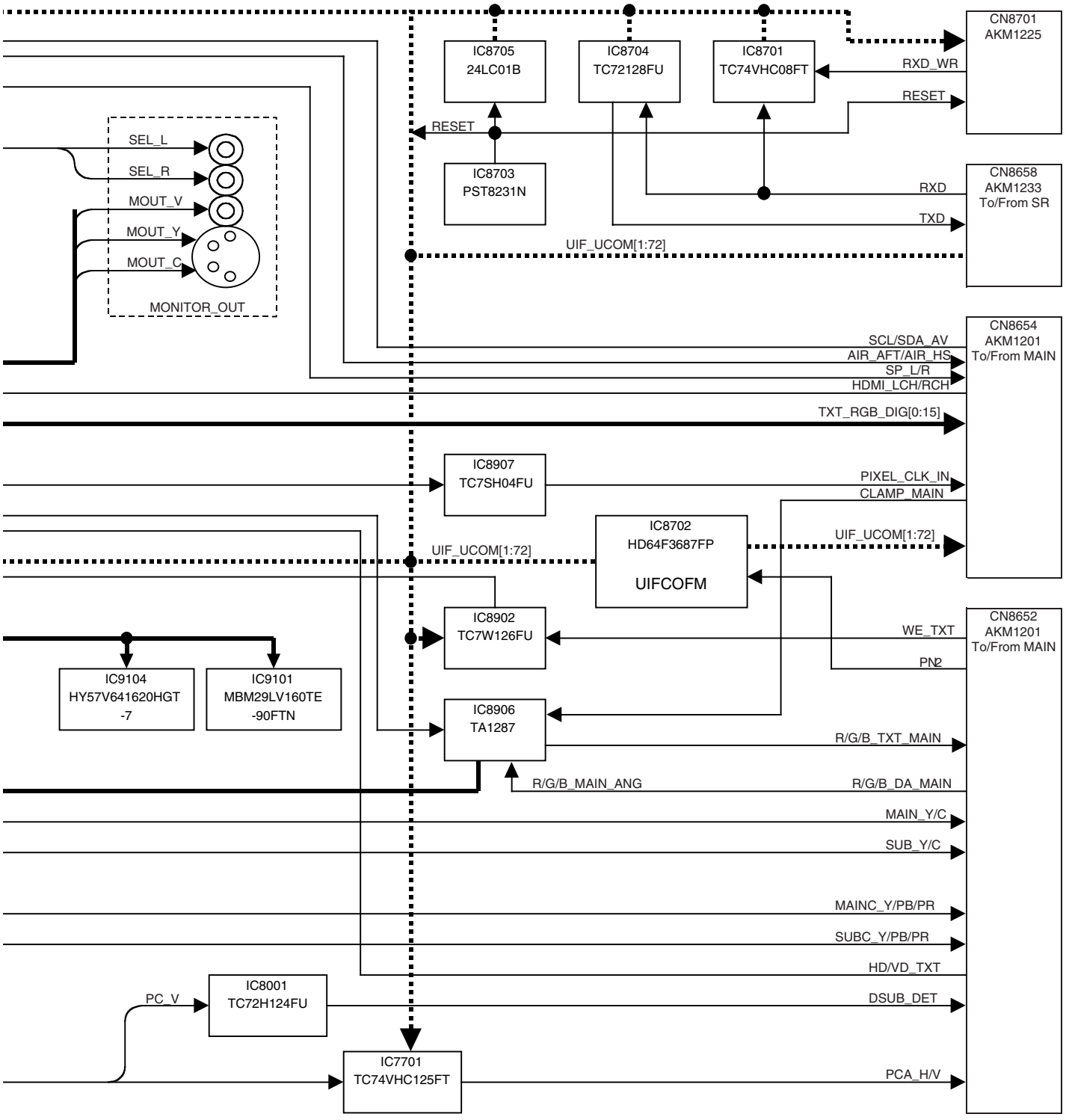
A MR MAIN BOARD ASSY



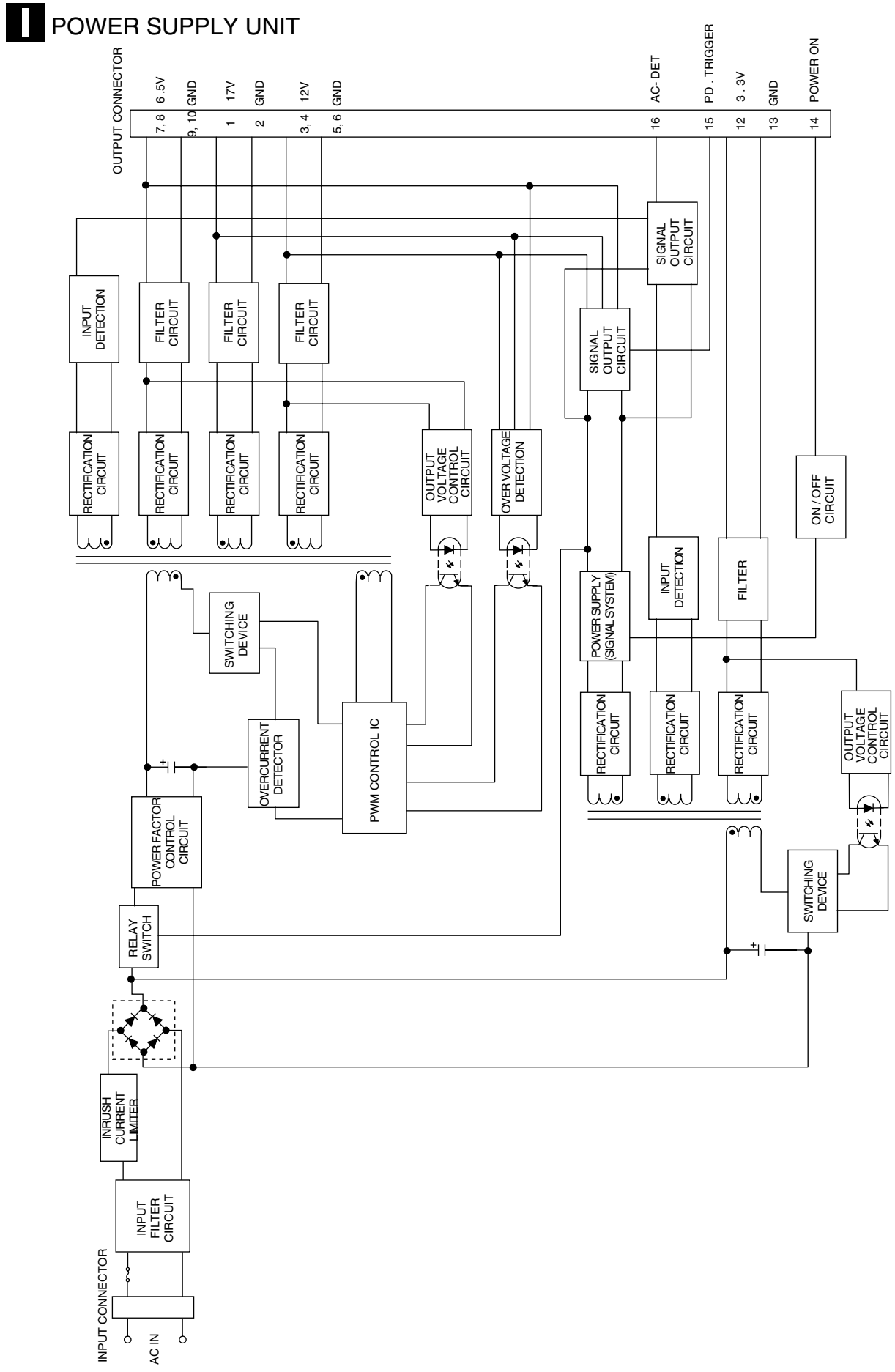

CN7402
AKM1234
To/From
MDV
ASSY
MAIN_UCOM[1:176]
IC7207
MB91F35APMTGE1
MAIN UCOM
FAN_
CONT
IC7301
NJM12904V
IC7302
M5291FP
FAN_
12V
CN7301
AKM1274
To FAN
FLD_MAIN
FAN_EN
IC6405
TC74VHC126FT
SYNC SELCCC
IC6404
BA7078AF
SYNC SEP.MAIN
IC6408
TC74VHC126FT
SYNC SEL
HD2/VD2_MAIN
HD1/VD1_MAIN
RA/GA/BA_MAIN[0:7],
CK_MAIN
PLLHD/PLLHOLD/
CLAMP_MAIN
HD/VD_MAIN
UARTRXD
UARTTXD
IC7004
PE5326A
I/P
MDY_IP
[0:31]
IC7001
HY57V643220CT-7
SDRAM
MA_IP[0:12]
MCTRL_IP[0:4]
MDC_IP
[0:31]
IC7002
HY57V643220CT-7
SDRAM
SYSCLK_2
IC7003
TC74LCX125FT
FIELD2
IC7202
TC74VHC125FT
TD0_IC3
RA/GA/BA/RB/
GB/BB_IC2[0:7]
FIELD
SYSCLK_3
RA/GA/BA_MAIN[0:7],CK/DE_MAIN
RA/GA/BA_SUB[0:7],CK/DE_SUB
EXDIO[0:15]
IC7151
MBM20PL3200BE70PFV
SDRAM
EXA[0:20]
EXDIO[0:15]
IC7152
MBM20PL3200BE70PFV
SDRAM
PLLHD/PLLHOLD/
CLAMP_SUB
RA/GA/BA_SUB[0:7],CK_SUB
IC6607
TC74VHC126FT
SYNC SEL
HD1/VD1_SUB
IC6604
BA7078AF
SYNC SEP.SUB
IC6603
TC74VHC126FT
SYNC SEL
HD2/VD2_SUB
IC7101
PE5855A
RESIZE MIX
RA/GA/BA
[0:9],VD0
IC7401
SII170BCLG64
DVI TX
TMDS[0:7]
CN7401
AKP1250
To/From
DVI
HD/DE_OUT
IC7404
TC74VCX08FT
CLK0
DE0,HD0
IC7403
TC74VCX574FT

3.1.3 AV BOARD ASSY




CN8701
AKM1225
IC8705
24LC01B
IC8704
TC72128FU
IC8701
TC74VHC08FT
RXD_WR
RESET
RESET
SEL_L
SEL_R
MOUT_V
MOUT_Y
MOUT_C
MONITOR_OUT
IC8703
PST8231N
CN8658
AKM1233
To/From SR
RXD
TXD
UIF_UCOM[1:72]
CN8654
AKM1201
To/From MAIN
SCL/SDA_AV
AIR_AFT/AIR_HS
SP_L/R
HDMI_LCH/RCH
TXT_RGB_DIG[0:15]
IC8907
TC7SH04FU
PIXEL_CLK_IN
CLAMP_MAIN
IC8702
HD64F3687FP
UIFCOFM
UIF_UCOM[1:72]
UIF_UCOM[1:72]
IC8902
TC7W126FU
CN8652
AKM1201
To/From MAIN
WE_TXT
PN2
IC9104
HY57V641620HGT
-7
IC9101
MBM29LV160TE
-90FTN
IC8906
TA1287
R/G/B_TXT_MAIN
R/G/B_MAIN_ANG
R/G/B_DA_MAIN
MAIN_Y/C
SUB_Y/C
MAINC_Y/PB/PR
SUBC_Y/PB/PR
HD/VD_TXT
PC_V
IC8001
TC72H124FU
DSUB_DET
IC7701
TC74VHC125FT
PCA_H/V

3.1.4 POWER SUPPLY UNIT



A

B

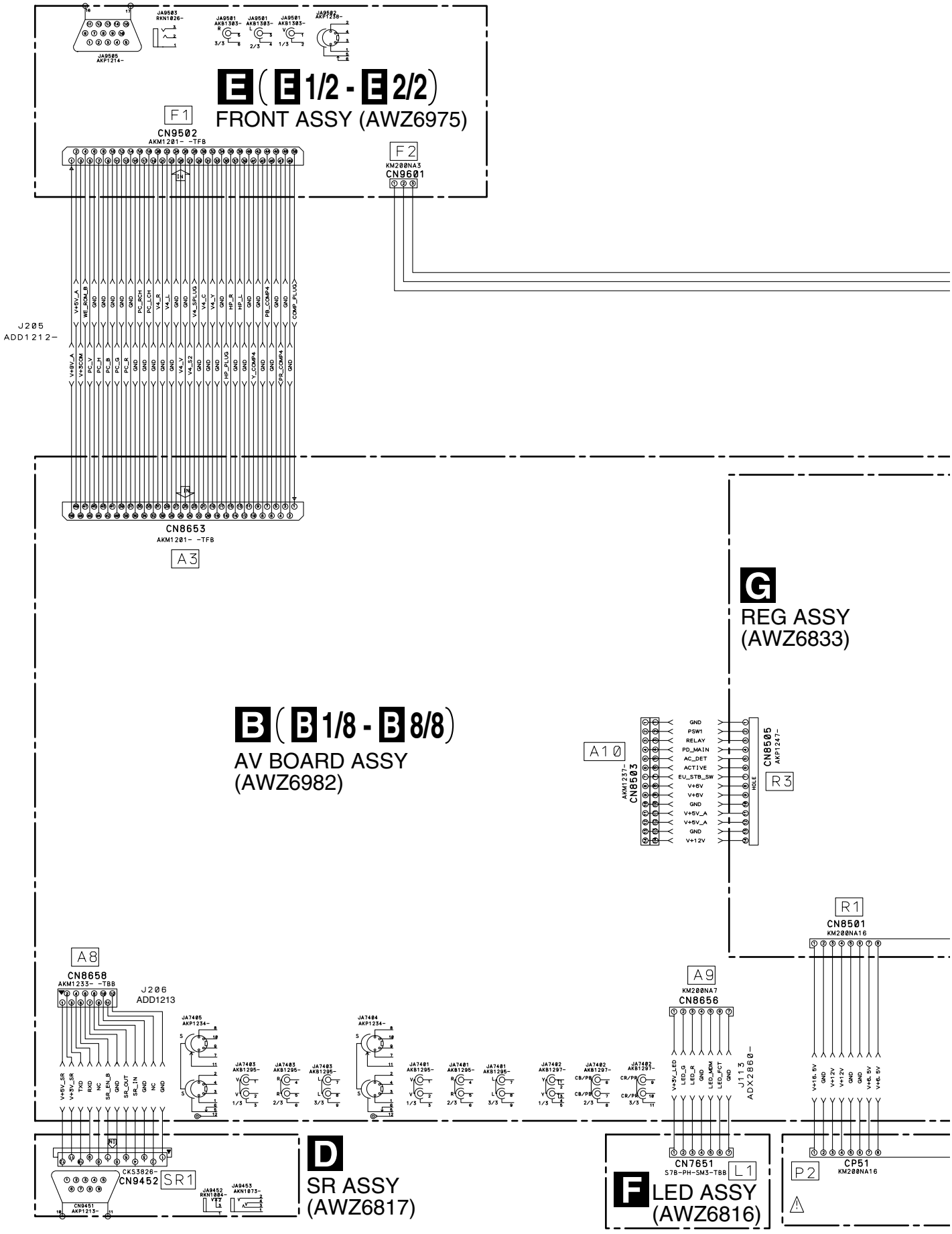
C

D

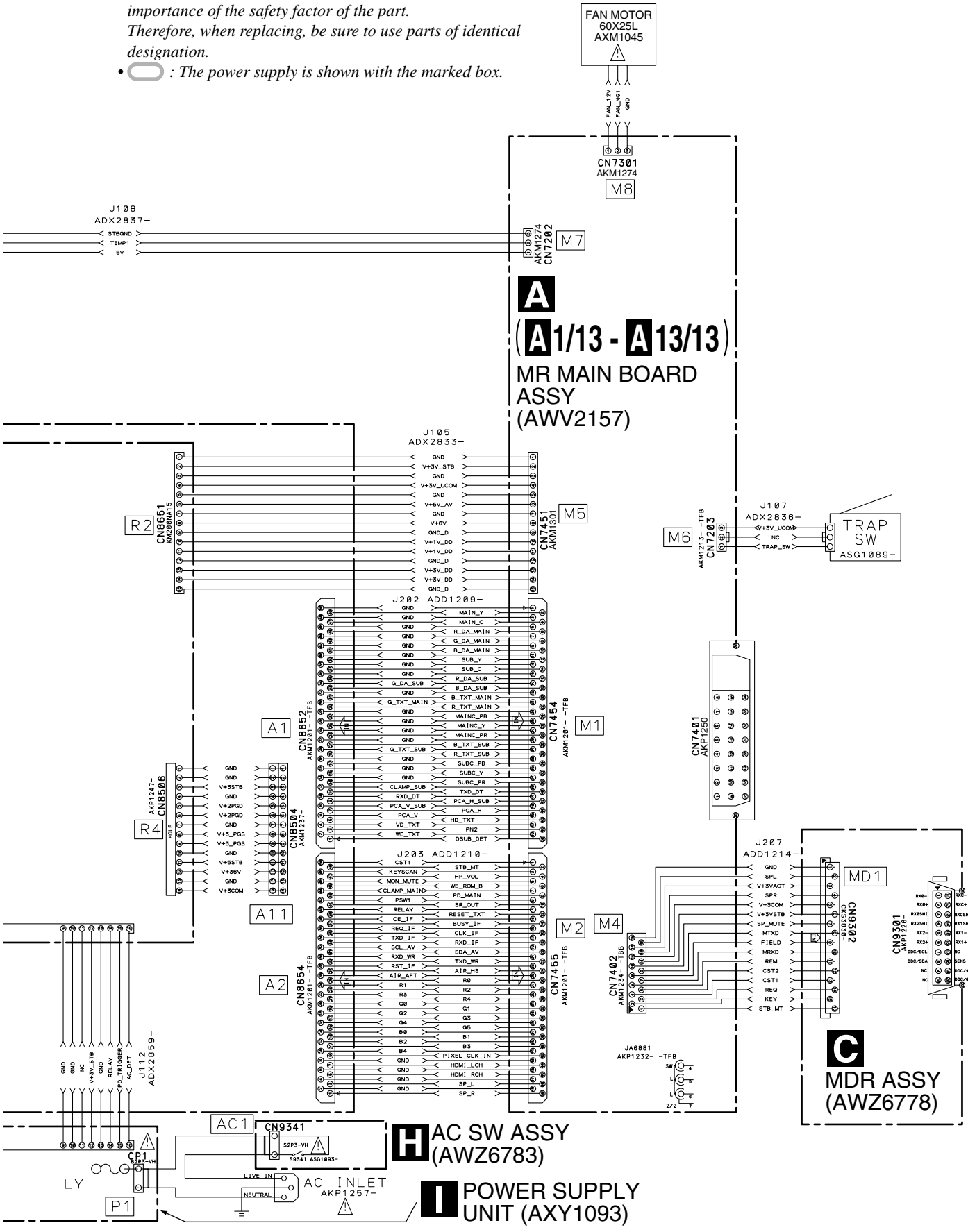
E

F

3.2 OVERALL WIRING CONNECTION DIAGRAM



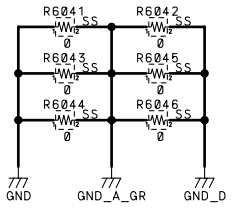
NOTES: • *When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".*
• *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
• *: The power supply is shown with the marked box.*

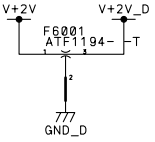


3.3 MR MAIN BOARD ASSY (1/13)

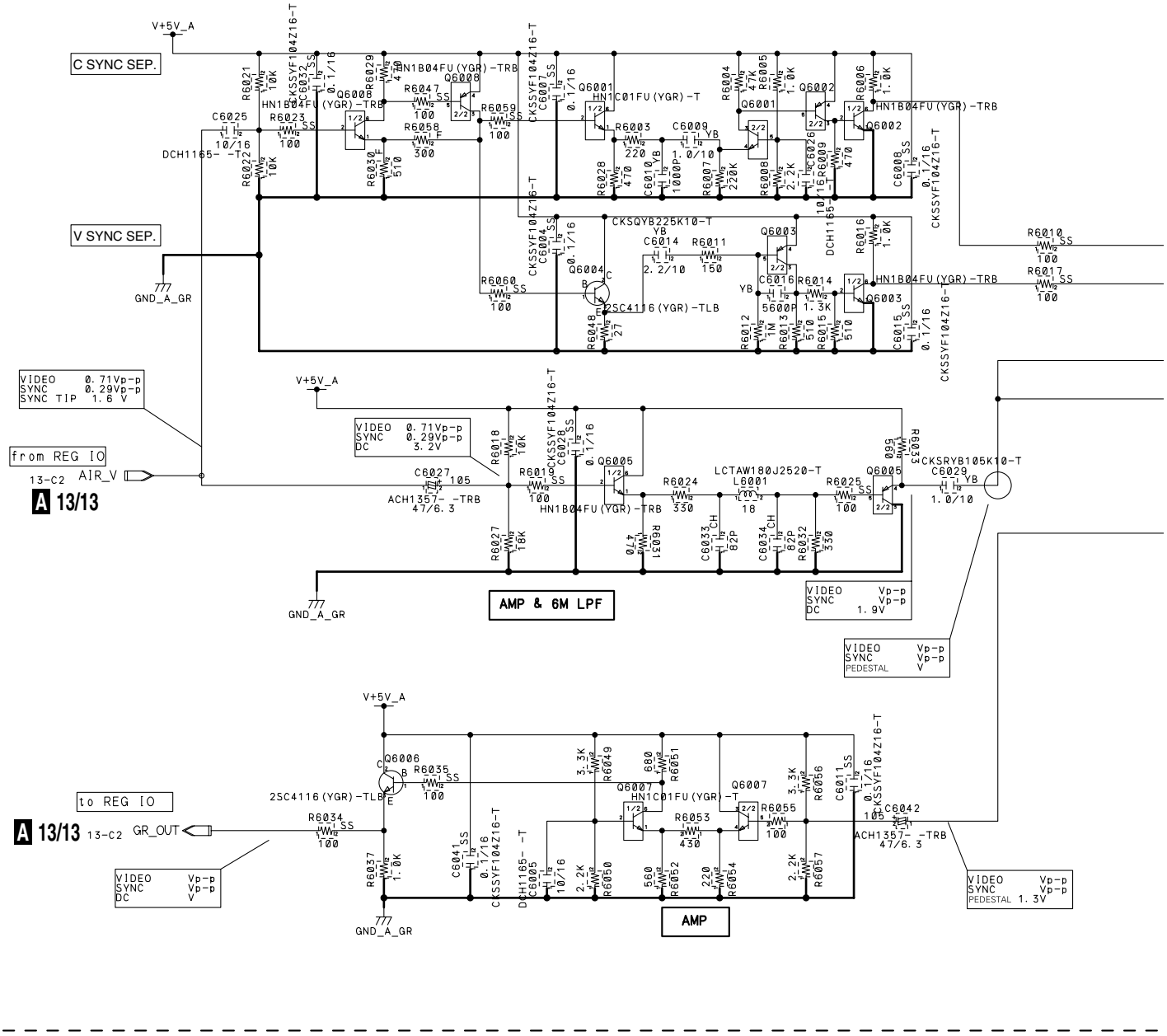
A 1/13 MR MAIN BOARD ASSY (AWV2157)

● **GR BLOCK**



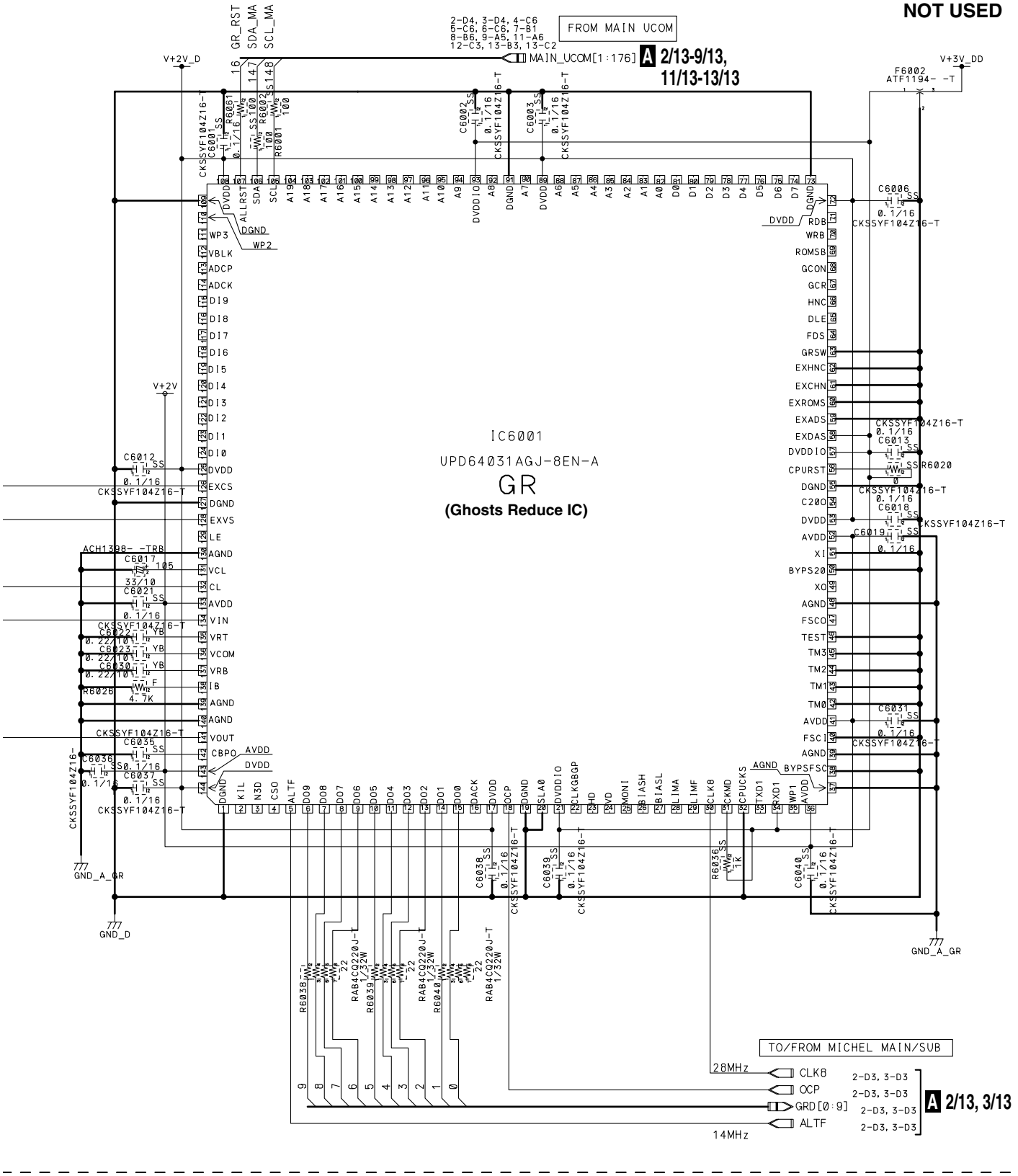


NOT USED



A 1/13

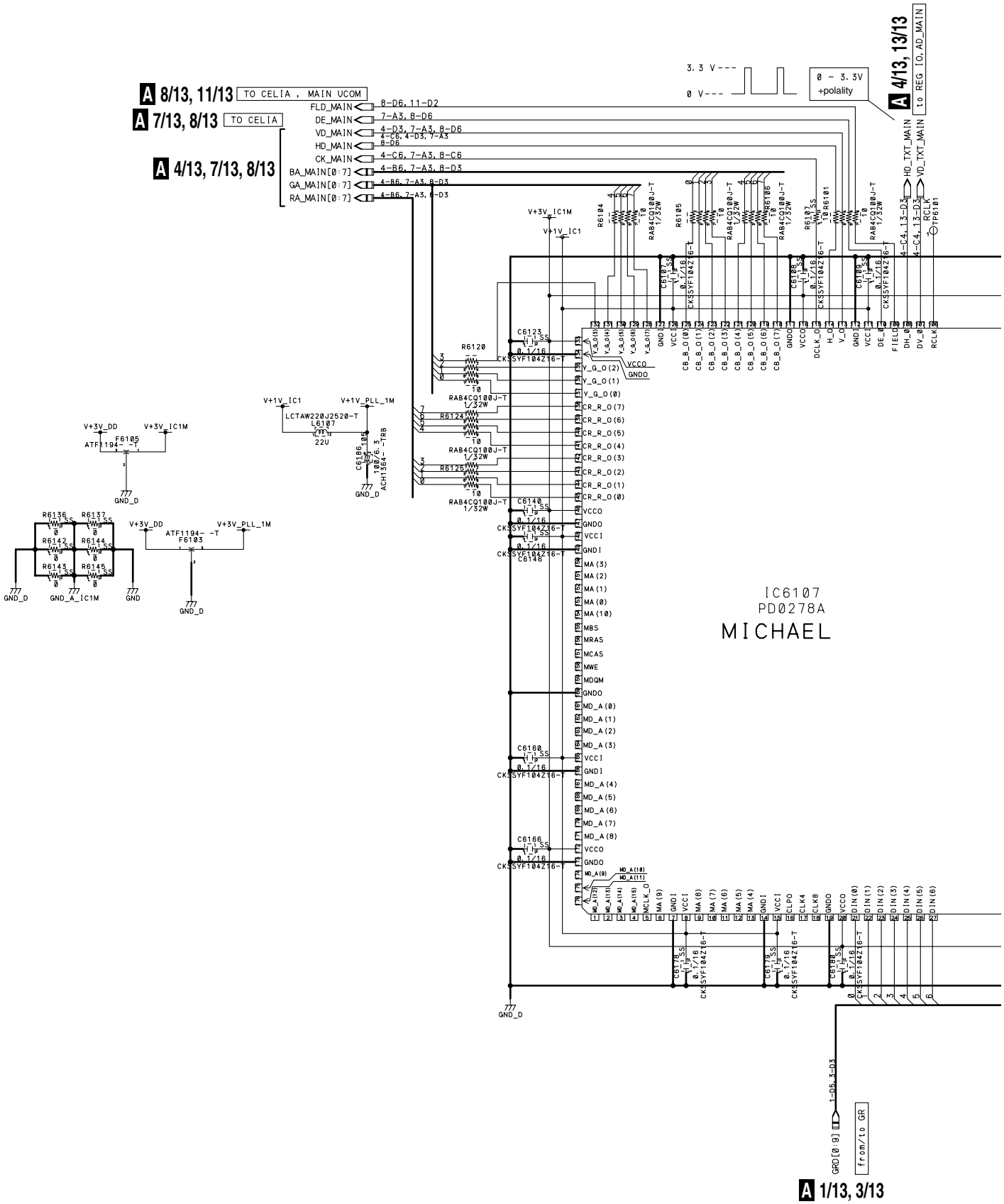
NOT USED


FROM MAIN UCOM
2-D4, 3-D4, 4-C6
5-C6, 6-C6, 7-B1
8-B6, 9-A5, 11-A6
12-C3, 13-B3, 13-C2
MAIN_UCOM[1:176]
A 2/13-9/13, 11/13-13/13
V+2V_D
V+3V_DD
V+2V
GR_RST
SDA_MA
SCL_MA
F6002
ATF1194- -T
IC6001
UPD64031AGJ-8EN-A
GR
(Ghosts Reduce IC)
ACH1398- -TRB
GND_A_GR
GND_D
TO/FROM MICHEL MAIN/SUB
28MHz
14MHz
CLK8
OCP
GRD[0:9]
ALTF
2-D3, 3-D3
A 2/13, 3/13

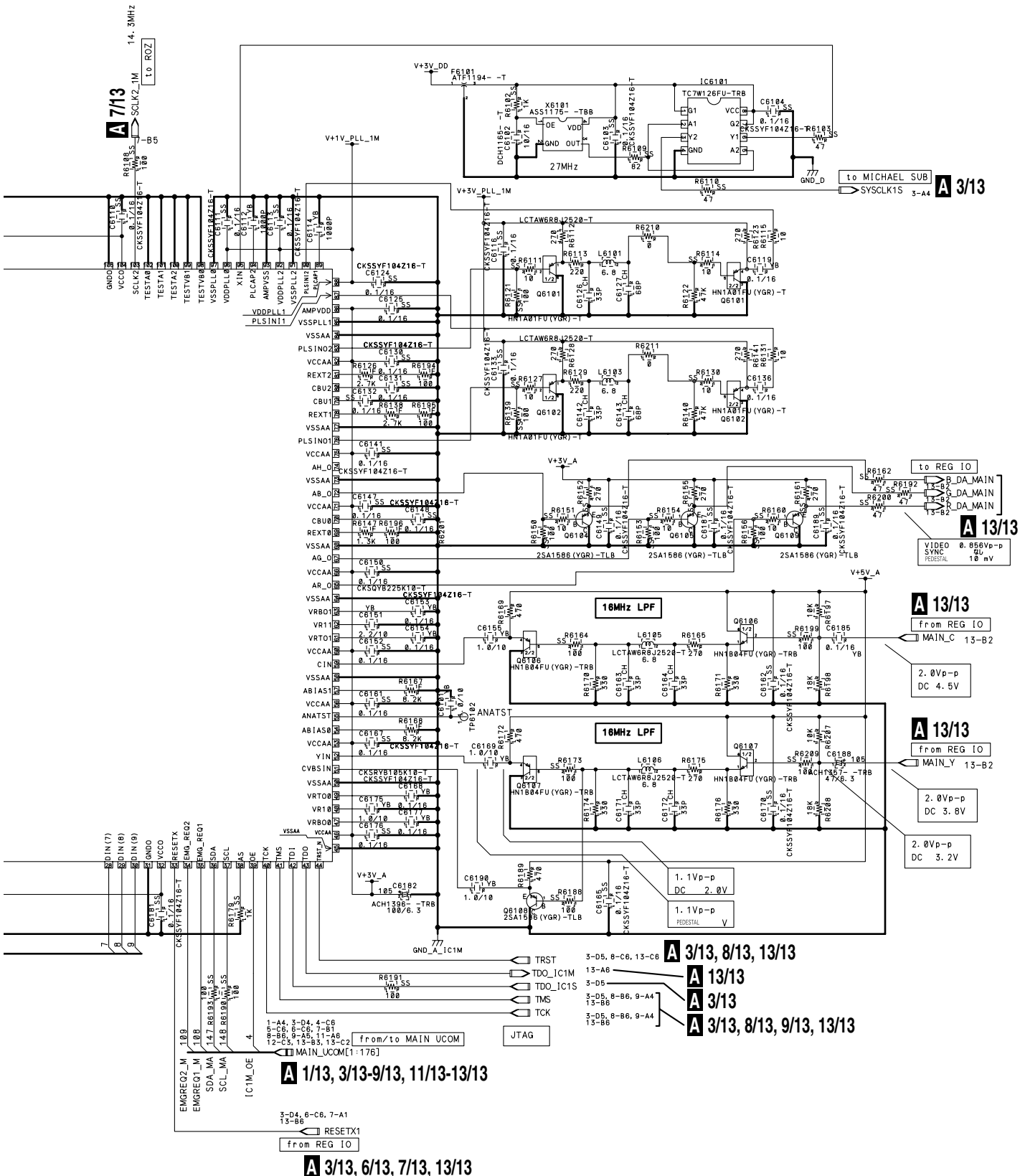
3.4 MR MAIN BOARD ASSY (2/13)

A 2/13 MR MAIN BOARD ASSY (AWV2157)

● **MICHAEL MAIN BLOCK**

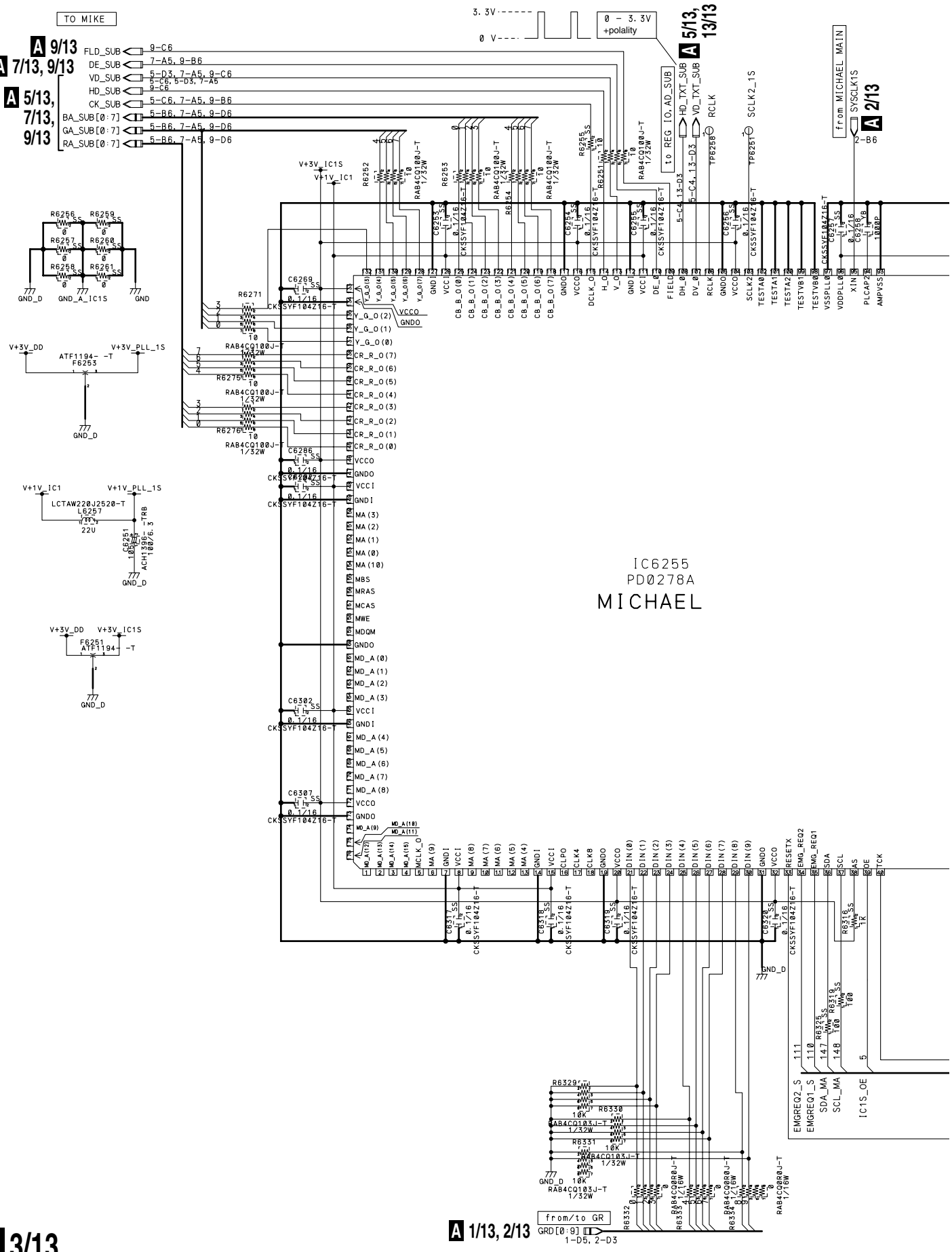


A 2/13


A 7/13
to ROZ
SCLK2_1M
14.3MHz
V+3V_DD
V+1V_PLL_1M
V+3V_PLL_1M
27MHz
X6101
IC6101
TC7W126FU-TRB
to MICHAEL SUB
SYSCLK1S
A 3/13
LCTAW6R8J2520-T
HN1A01FU(YGR)-T
HN1B04FU(YGR)-TRB
2SA1586(YGR)-TLB
V+3V_A
V+5V_A
to REG IO
B_DA_MAIN
G_DA_MAIN
R_DA_MAIN
A 13/13
VIDEO SYNC PEDESTAL
0.856Vp-p
4U
10 mV
16MHz LPF
from REG IO
MAIN_C
MAIN_Y
2.0Vp-p DC 4.5V
2.0Vp-p DC 3.8V
2.0Vp-p DC 3.2V
1.1Vp-p DC 2.0V
1.1Vp-p PEDESTAL V
ANATST
TRST
TDO_IC1M
TDO_IC1S
TMS
TCK
JTAG
3-D5, 8-C6, 13-C6
13-A6
3-D5
3-D5, 8-B6, 9-A4
13-B6
A 3/13, 8/13, 13/13
A 13/13
A 3/13
A 3/13, 8/13, 9/13, 13/13
1-A4, 3-D4, 4-C6
5-C6, 6-C6, 7-B1
8-B6, 9-A5, 11-A6
12-C3, 13-B3, 13-C2
from/to MAIN UCOM
MAIN_UCOM[1:176]
A 1/13, 3/13-9/13, 11/13-13/13
EMGREQ2_M
EMGREQ1_M
SDA_MA
SCL_MA
IC1M_OE
3-D4, 6-C6, 7-A1
13-B6
RESETX1
from REG IO
A 3/13, 6/13, 7/13, 13/13
GND_A_IC1M
GND_D

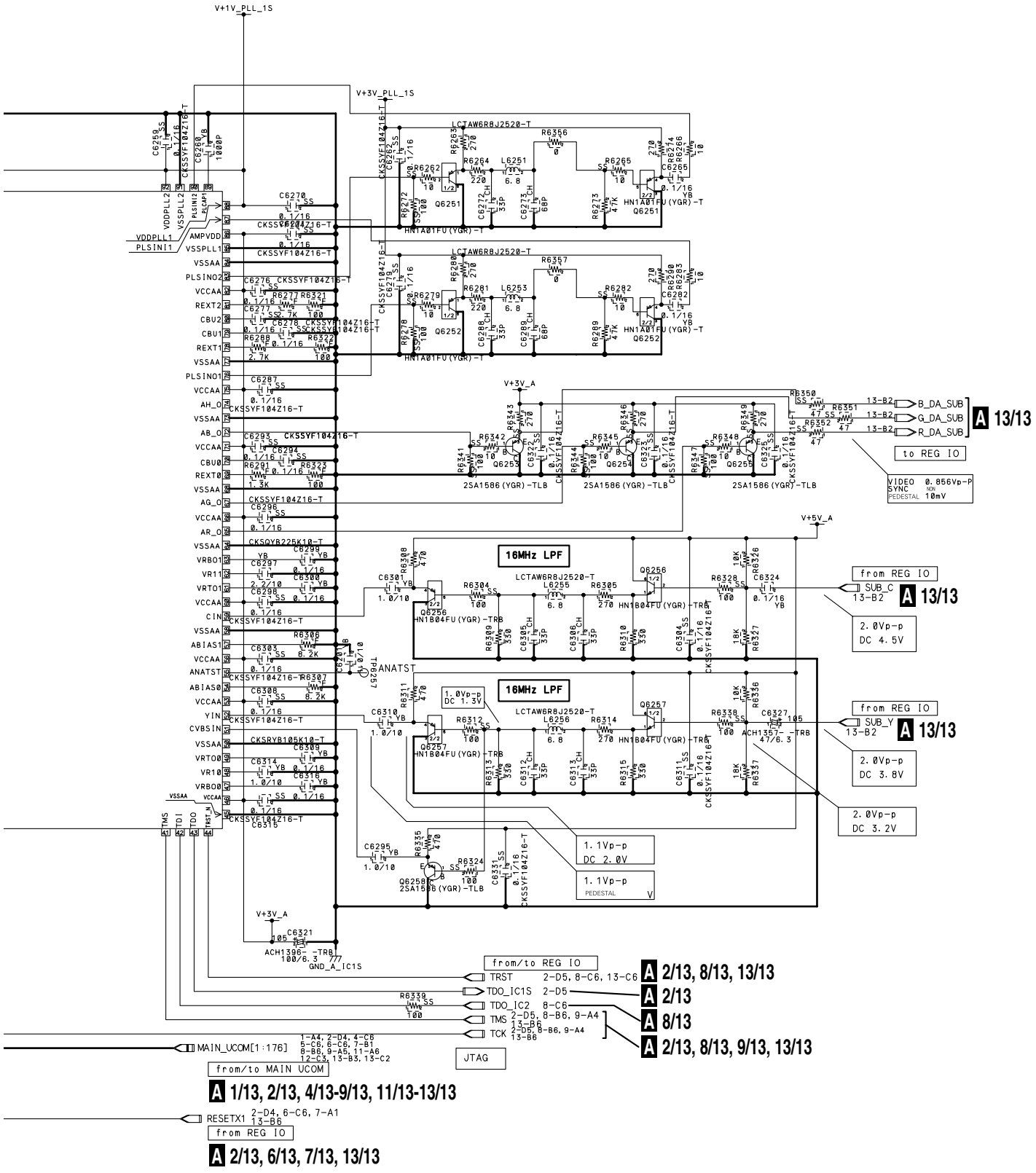
A 2/13

3.5 MR MAIN BOARD ASSY (3/13)



A 3/13 MR MAIN BOARD ASSY (AWV2157)

● MICHAEL SUB BLOCK



A 13/13

A 13/13

A 13/13

A 2/13, 8/13, 13/13

A 2/13

A 8/13

A 2/13, 8/13, 9/13, 13/13

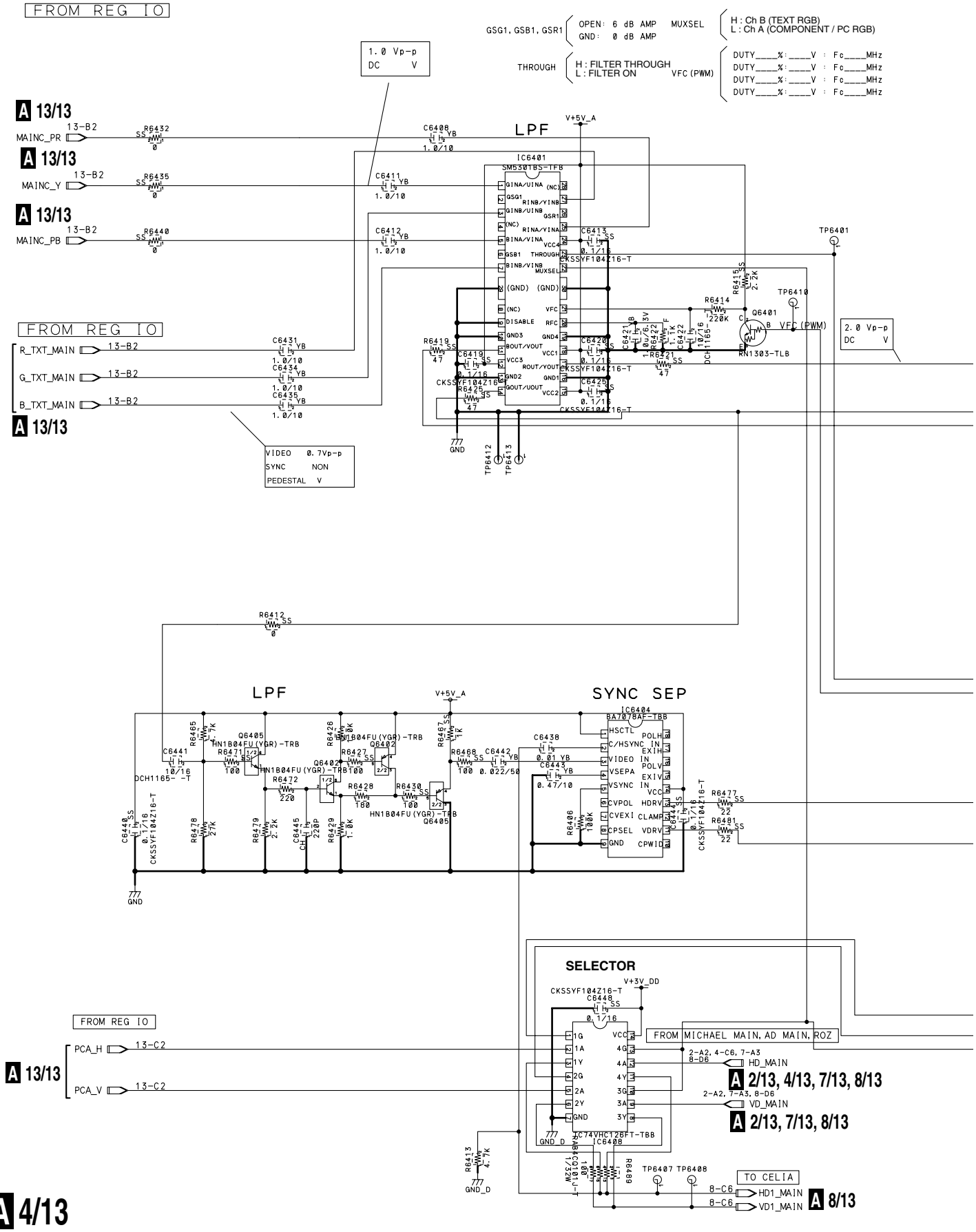
A 1/13, 2/13, 4/13-9/13, 11/13-13/13

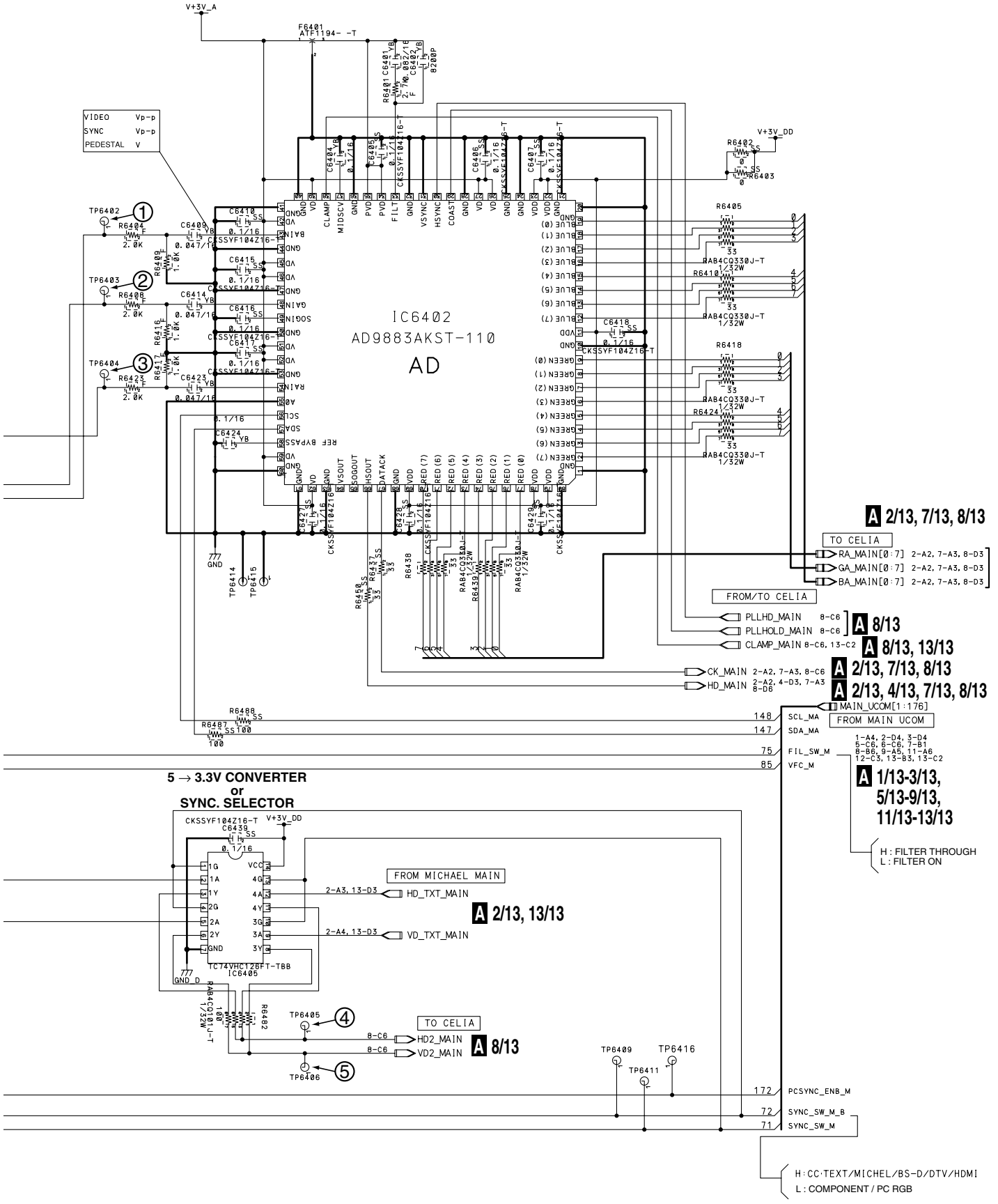
A 2/13, 6/13, 7/13, 13/13

3.6 MR MAIN BOARD ASSY (4/13)

A 4/13 MR MAIN BOARD ASSY (AWV2157)

● **AD MAIN BLOCK**

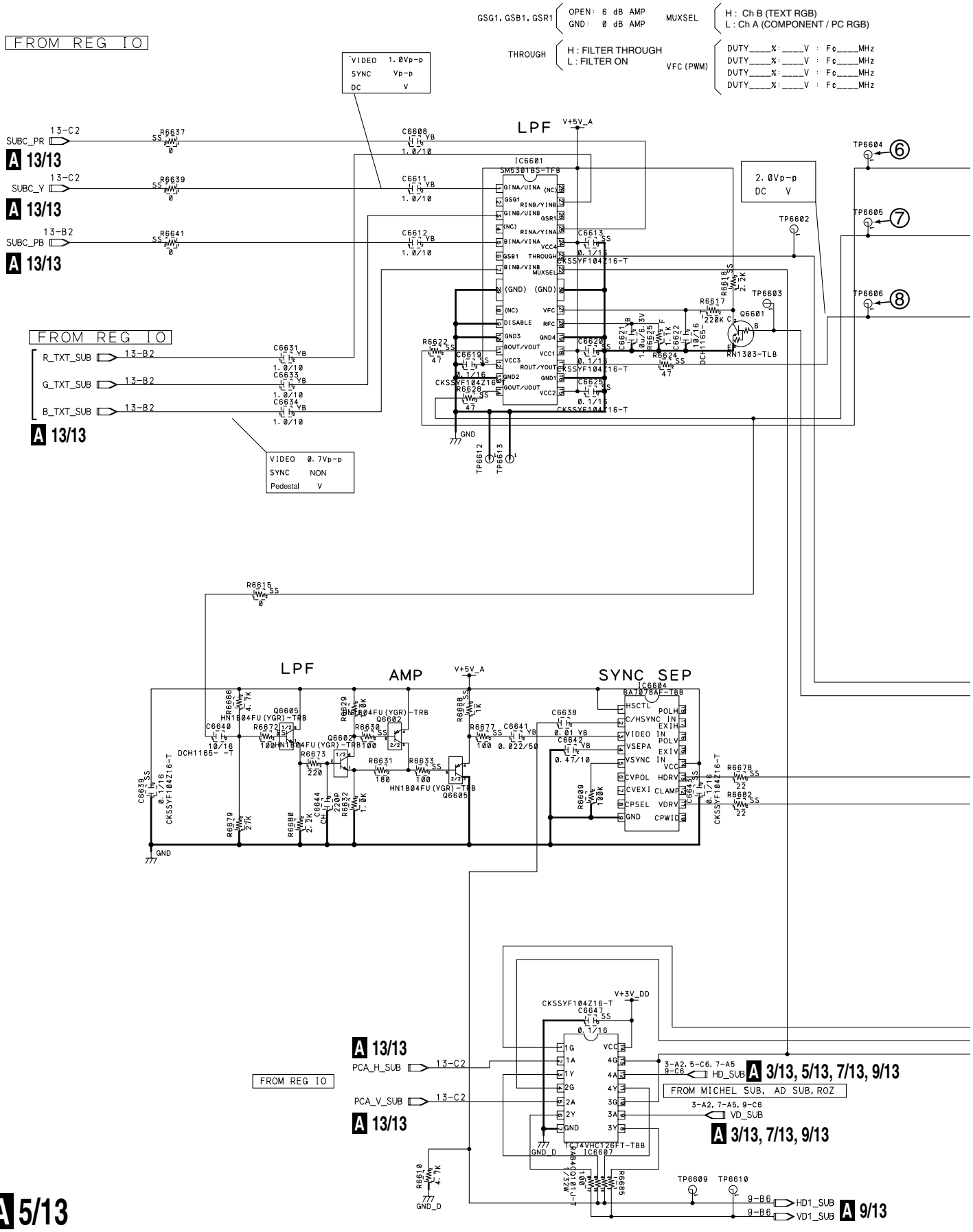



IC6402
AD9883AKST-110
AD
VIDEO Vp-p
SYNC Vp-p
PEDESTAL V
TO CELIA
RA_MAIN[0:7] 2-A2, 7-A3, 8-D3
GA_MAIN[0:7] 2-A2, 7-A3, 8-D3
BA_MAIN[0:7] 2-A2, 7-A3, 8-D3
A 2/13, 7/13, 8/13
FROM/TO CELIA
PLLHD_MAIN 8-C6
PLLHOLD_MAIN 8-C6
CLAMP_MAIN 8-C6, 13-C2
A 8/13
A 8/13, 13/13
CK_MAIN 2-A2, 7-A3, 8-C6
HD_MAIN 2-A2, 4-D3, 7-A3 8-D6
A 2/13, 7/13, 8/13
A 2/13, 4/13, 7/13, 8/13
MAIN_UCOM[1:176]
FROM MAIN UCOM
SCL_MA
SDA_MA
FIL_SW_M
VFC_M
1-A4, 2-D4, 3-D4 5-C6, 6-C6, 7-B1 8-B6, 9-A5, 11-A6 12-C3, 13-B3, 13-C2
A 1/13-3/13, 5/13-9/13, 11/13-13/13
H : FILTER THROUGH
L : FILTER ON
5 → 3.3V CONVERTER or SYNC. SELECTOR
TC74VHC126FT-TBB
IC6405
FROM MICHAEL MAIN
2-A3, 13-D3 HD_TXT_MAIN
2-A4, 13-D3 VD_TXT_MAIN
A 2/13, 13/13
TO CELIA
8-C6 HD2_MAIN
8-C6 VD2_MAIN
A 8/13
PCSYNC_ENB_M
SYNC_SW_M_B
SYNC_SW_M
H : CC·TEXT/MICHEL/BS-D/DTV/HDMI
L : COMPONENT / PC RGB
A 4/13

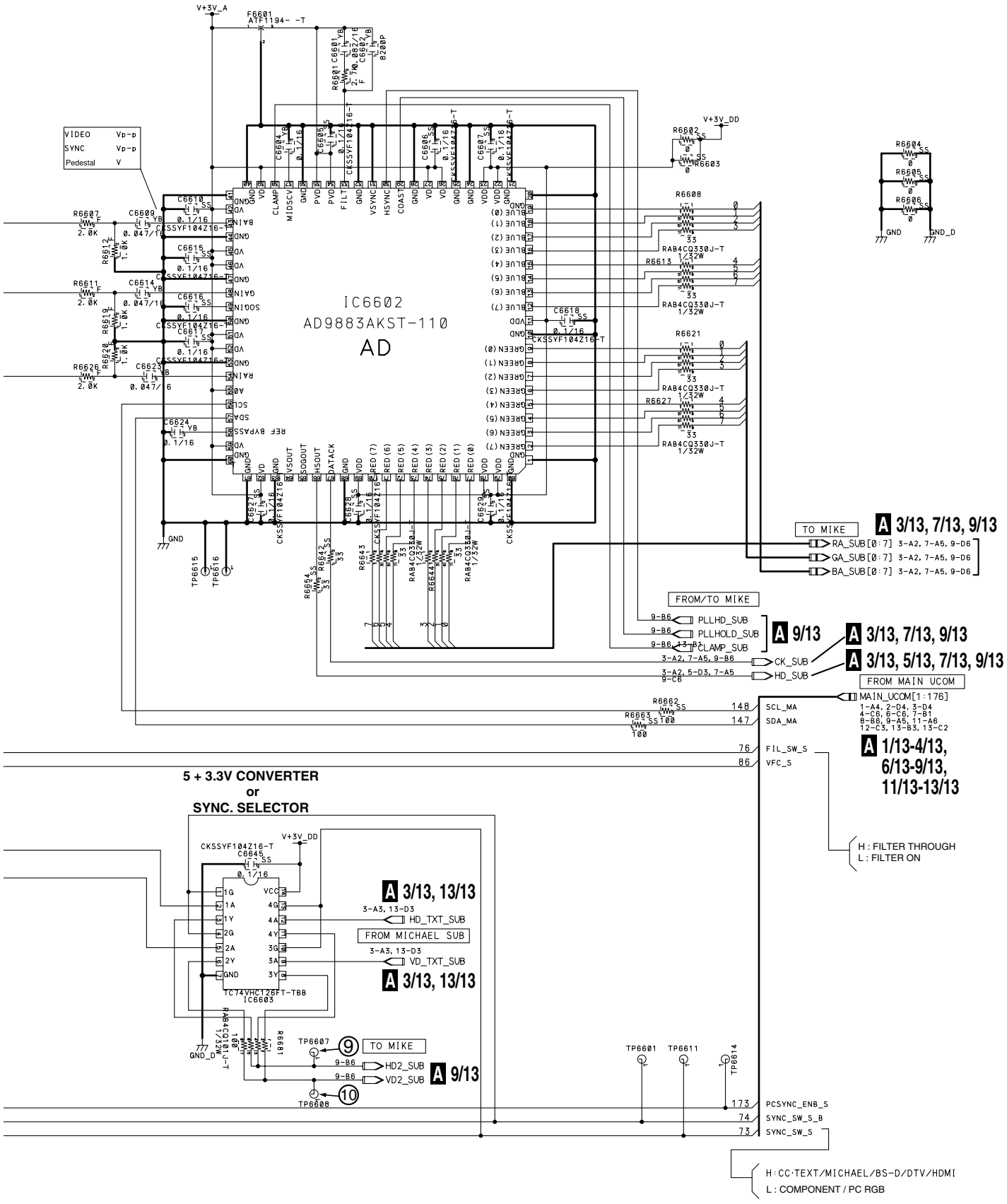
3.7 MR MAIN BOARD ASSY (5/13)

A 5/13 MR MAIN BOARD ASSY (AWV2157)

● **AD SUB BLOCK**



A 5/13

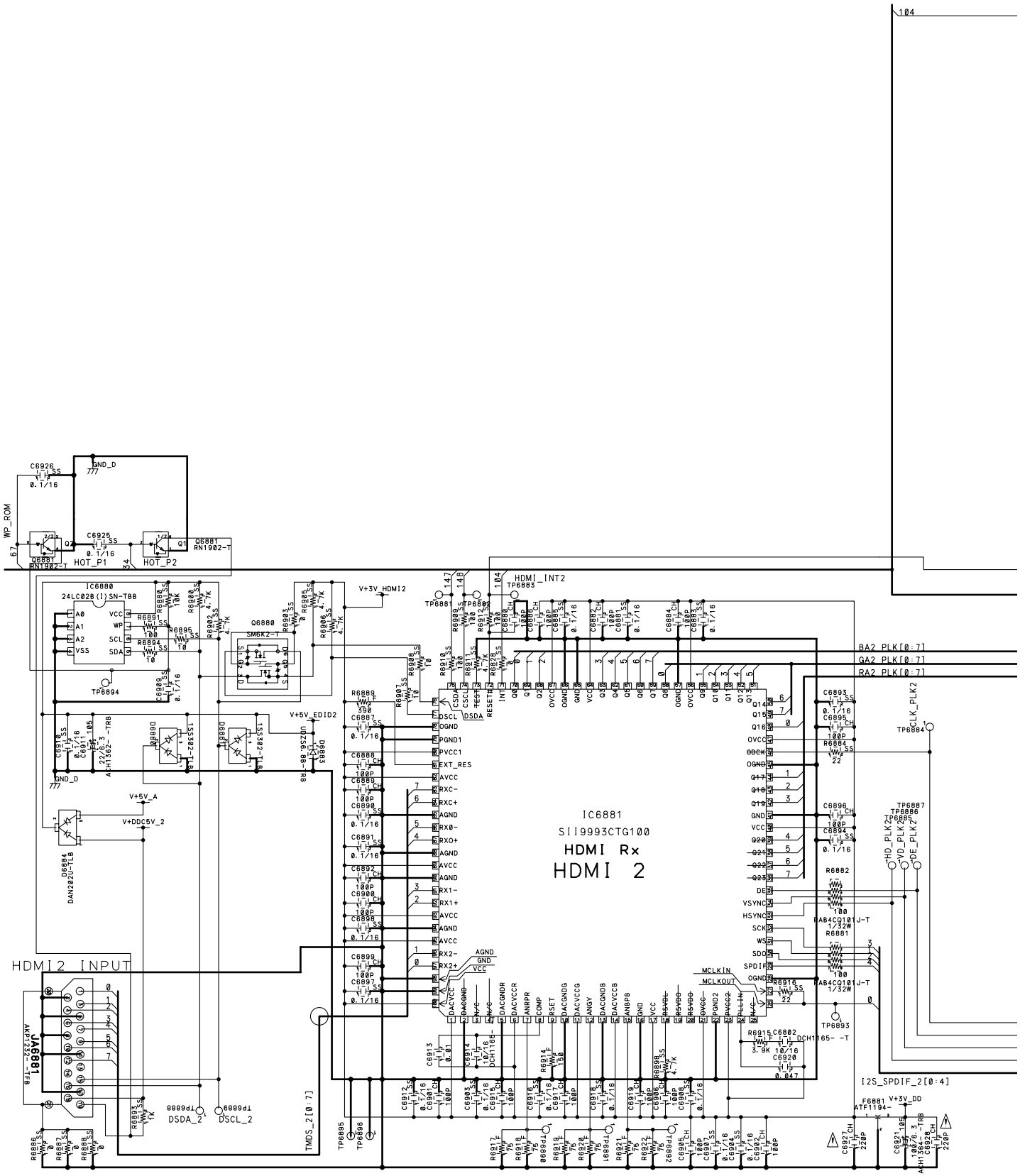

IC6602
AD9883AKST-110
AD
VIDEO Vp-p
SYNC Vp-p
Pedestal V
TO MIKE
A 3/13, 7/13, 9/13
RA_SUB[0:7] 3-A2, 7-A5, 9-D6
GA_SUB[0:7] 3-A2, 7-A5, 9-D6
BA_SUB[0:7] 3-A2, 7-A5, 9-D6
FROM/TO MIKE
PLLHD_SUB
PLLHOLD_SUB
CLAMP_SUB
A 9/13
A 3/13, 7/13, 9/13
CK_SUB
A 3/13, 5/13, 7/13, 9/13
HD_SUB
FROM MAIN UCOM
MAIN_UCOM[1:176]
SCL_MA
SDA_MA
A 1/13-4/13, 6/13-9/13, 11/13-13/13
FIL_SW_S
VFC_S
H : FILTER THROUGH
L : FILTER ON
5 + 3.3V CONVERTER
or
SYNC. SELECTOR
TC74VHC126FT-TBB
IC6603
A 3/13, 13/13
HD_TXT_SUB
FROM MICHAEL SUB
VD_TXT_SUB
A 3/13, 13/13
TO MIKE
HD2_SUB
VD2_SUB
A 9/13
PCSYNC_ENB_S
SYNC_SW_S_B
SYNC_SW_S
H : CC·TEXT/MICHAEL/BS-D/DTV/HDMI
L : COMPONENT / PC RGB

A 5/13

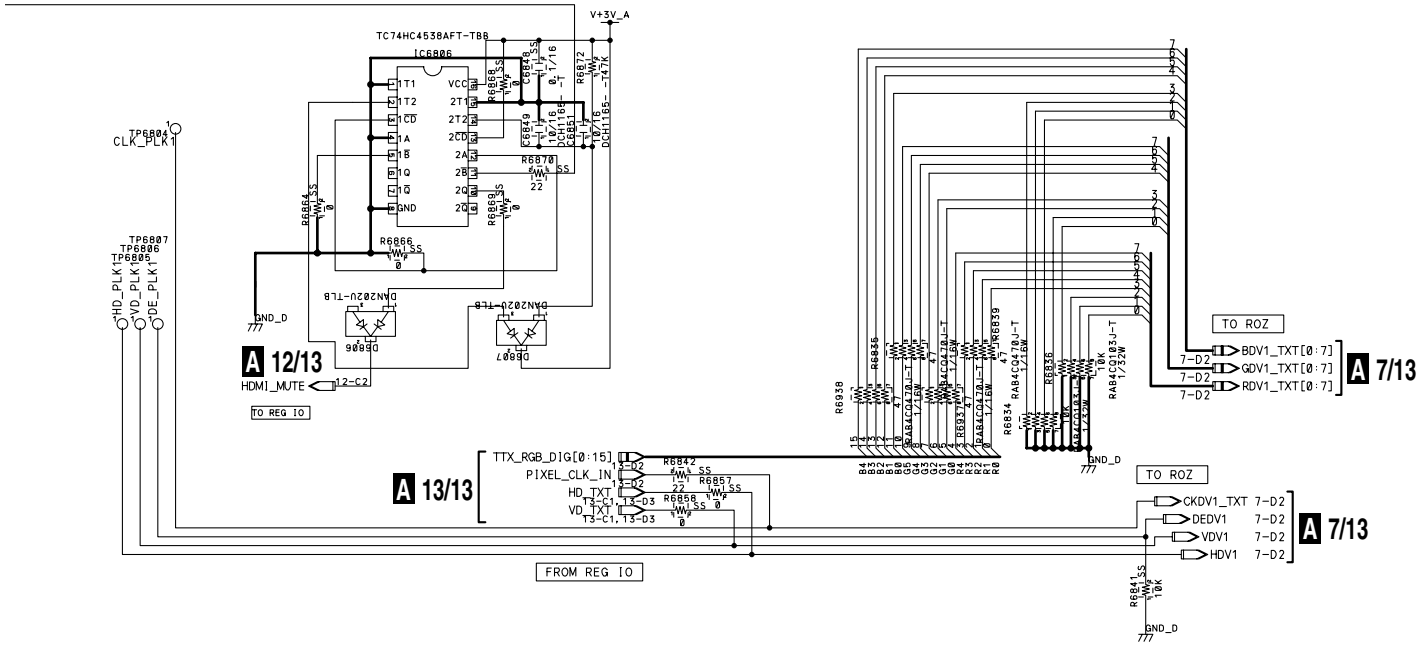
3.8 MR MAIN BOARD ASSY (6/13)

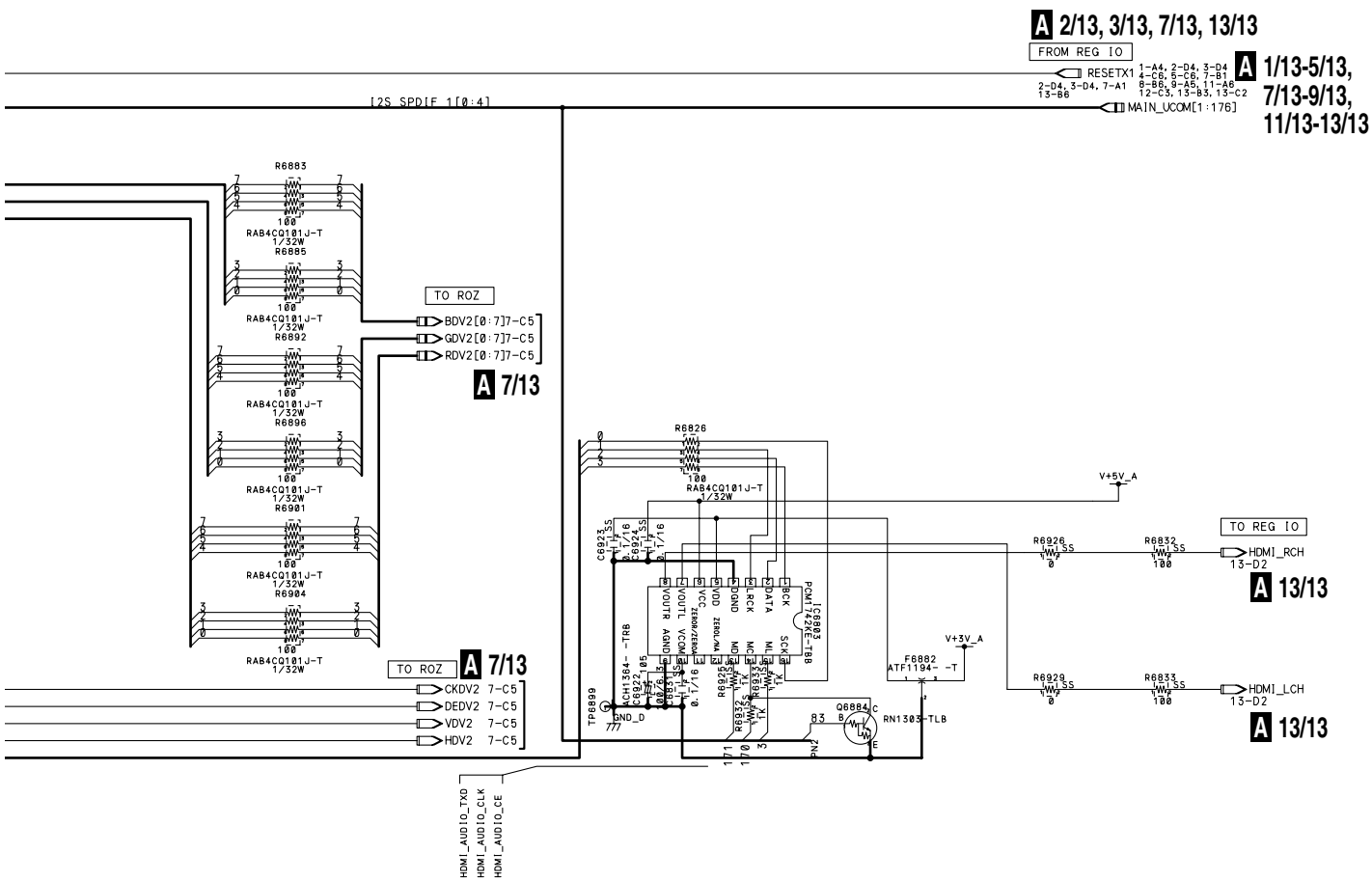
A 6/13 MR MAIN BOARD ASSY (AWV2157)

● **HDMI RX BLOCK**



A 6/13

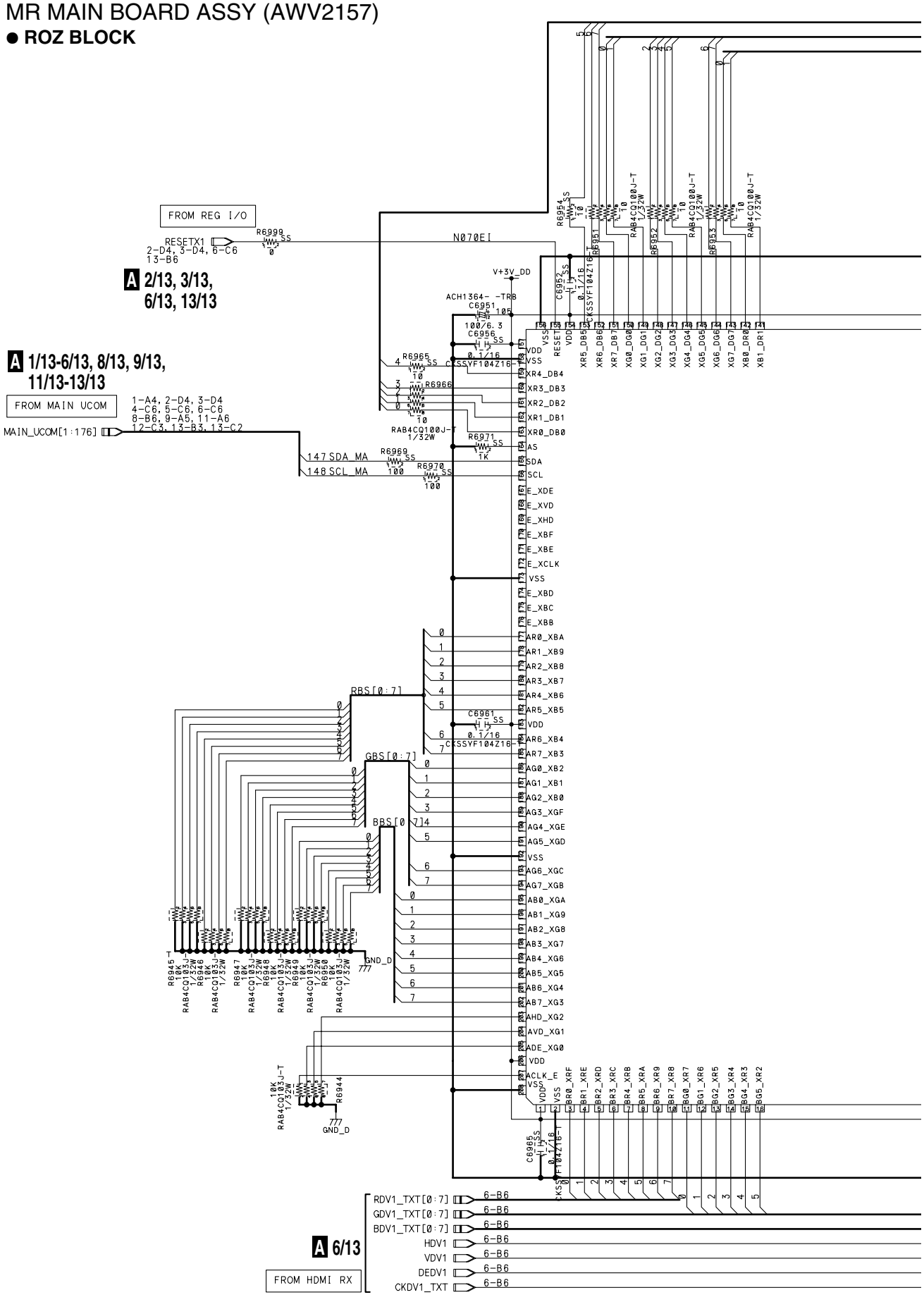

TC74HC4538AFT-TBB
IC6806
V+3V_A
TP6804
CLK_PLK1
TP6807
TP6806
TP6805
HD_PLK1
VD_PLK1
DE_PLK1
GND_D
DAN202U-TLB
D6806
D6807
A 12/13
HDMI_MUTE
12-C2
TO REG IO
A 13/13
TTX_RGB_DIG[0:15]
PIXEL_CLK_IN
HD_TXT
VD_TXT
T3-C1, T3-D3
FROM REG IO
TO ROZ
BDV1_TXT[0:7]
GDV1_TXT[0:7]
RDV1_TXT[0:7]
7-D2
A 7/13
CKDV1_TXT
DEDV1
VDV1
HDV1
R6841
10K


A 2/13, 3/13, 7/13, 13/13
FROM REG IO
RESETX1
MAIN_UCOM[1:176]
A 1/13-5/13, 7/13-9/13, 11/13-13/13
I2S_SPDIF_1[0:4]
TO ROZ
BDV2[0:7]7-C5
GDV2[0:7]7-C5
RDV2[0:7]7-C5
A 7/13
CKDV2 7-C5
DEDV2 7-C5
VDV2 7-C5
HDV2 7-C5
RAB4CQ101J-T
1/32W
100
TO REG IO
HDMI_RCH
13-D2
HDMI_LCH
A 13/13
V+5V_A
V+3V_A
F6882
ATF1194- -T
Q6884
RN1303-TLB
TP6899
GND_D
HDMI_AUDIO_TXD
HDMI_AUDIO_CLK
HDMI_AUDIO_CE
A 6/13

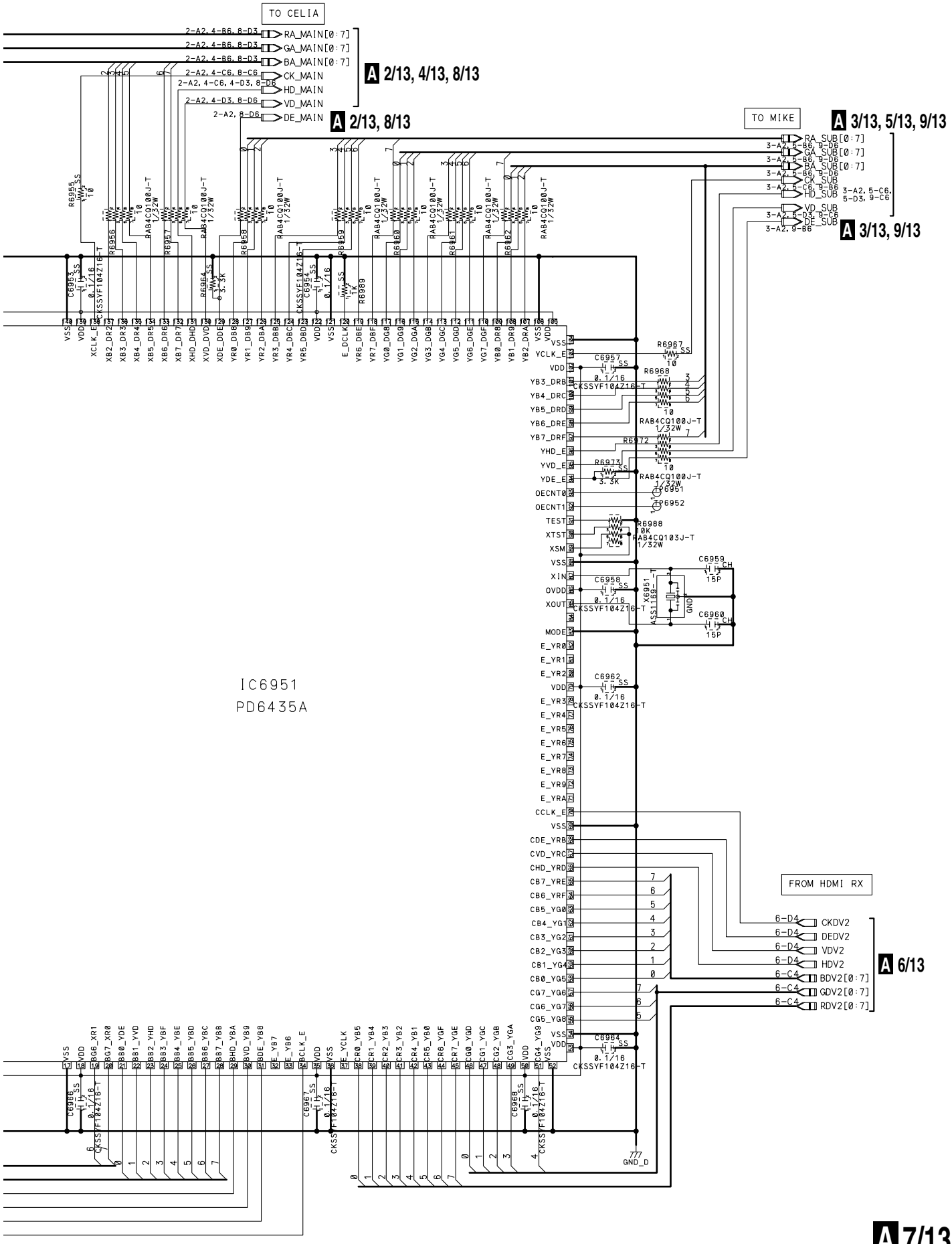
3.9 MR MAIN BOARD ASSY (7/13)

A 7/13 MR MAIN BOARD ASSY (AWV2157)

● **ROZ BLOCK**



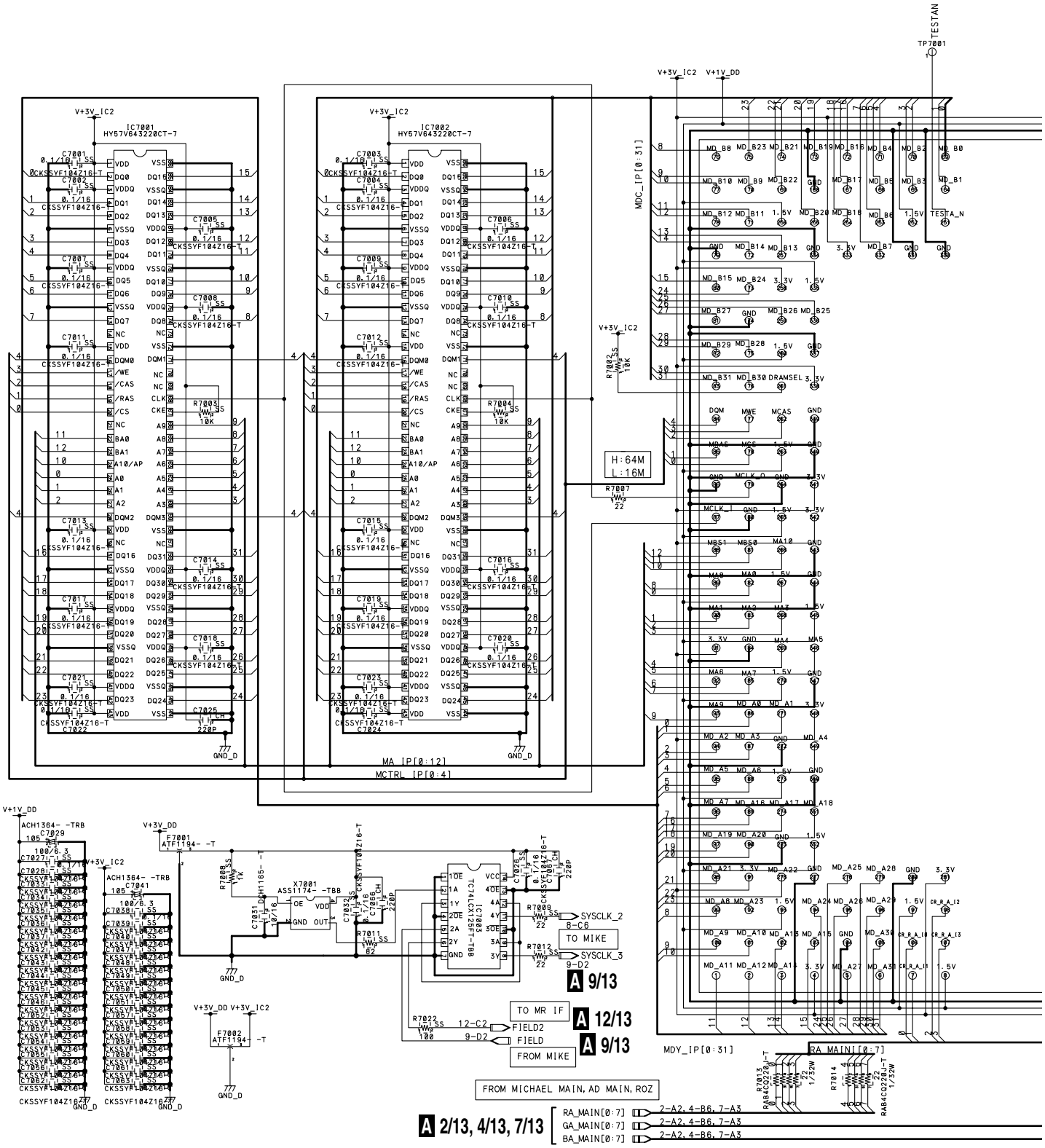
A 7/13

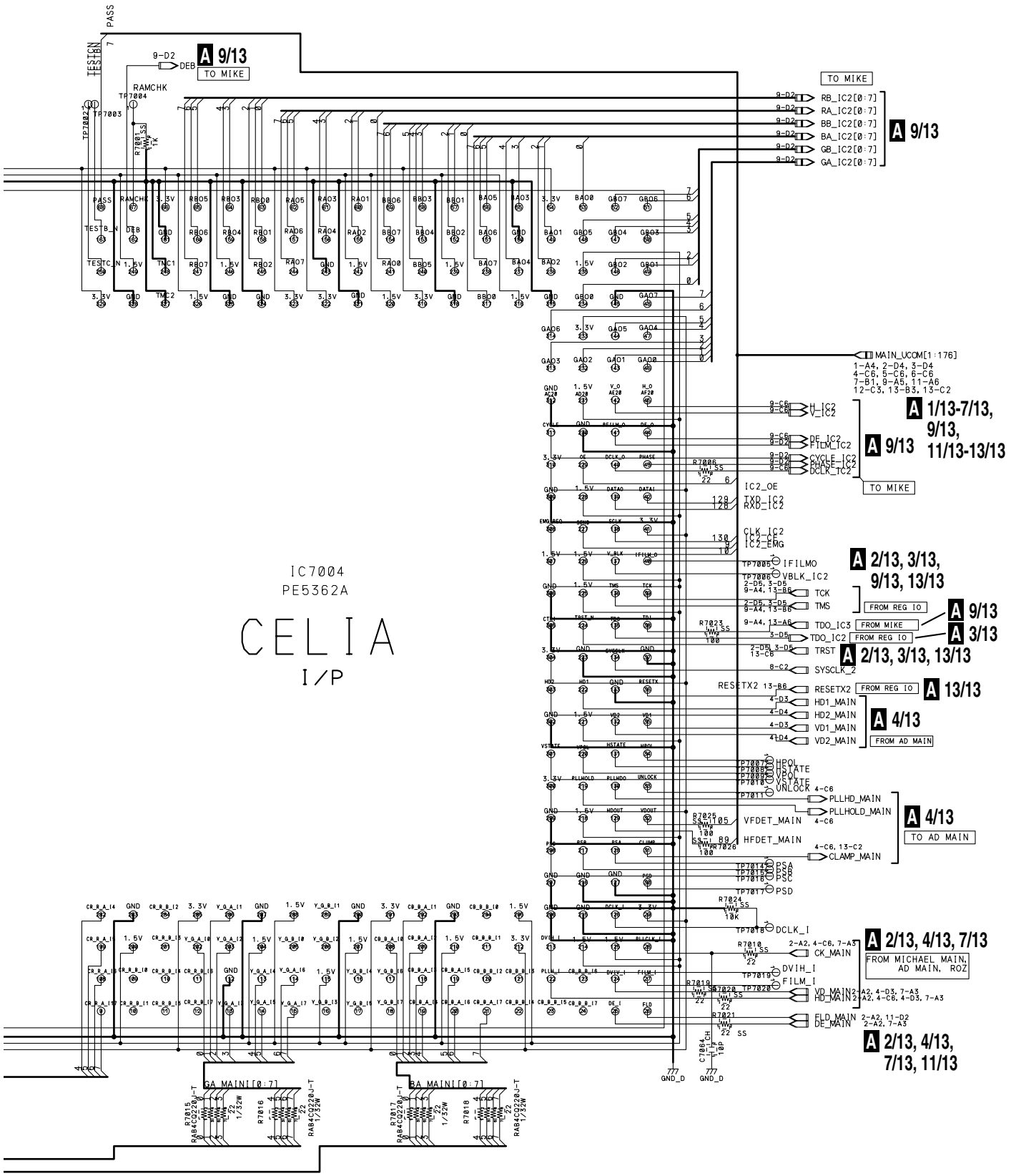

TO CELIA
RA_MAIN[0:7]
GA_MAIN[0:7]
BA_MAIN[0:7]
CK_MAIN
HD_MAIN
VD_MAIN
DE_MAIN
A 2/13, 4/13, 8/13
A 2/13, 8/13
TO MIKE
A 3/13, 5/13, 9/13
RA_SUB[0:7]
GA_SUB[0:7]
BA_SUB[0:7]
CK_SUB
HD_SUB
VD_SUB
DE_SUB
3-A2, 5-C6, 5-D3, 9-C6
A 3/13, 9/13
IC6951
PD6435A
FROM HDMI RX
6-D4 CKDV2
6-D4 DEDV2
6-D4 VDV2
6-D4 HDV2
6-C4 BDV2[0:7]
6-C4 GDV2[0:7]
6-C4 RDV2[0:7]
A 6/13
GND_D
A 7/13

3.10 MR MAIN BOARD ASSY (8/13)

A 8/13 MR MAIN BOARD ASSY (AWV2157)

● **CELIA BLOCK**

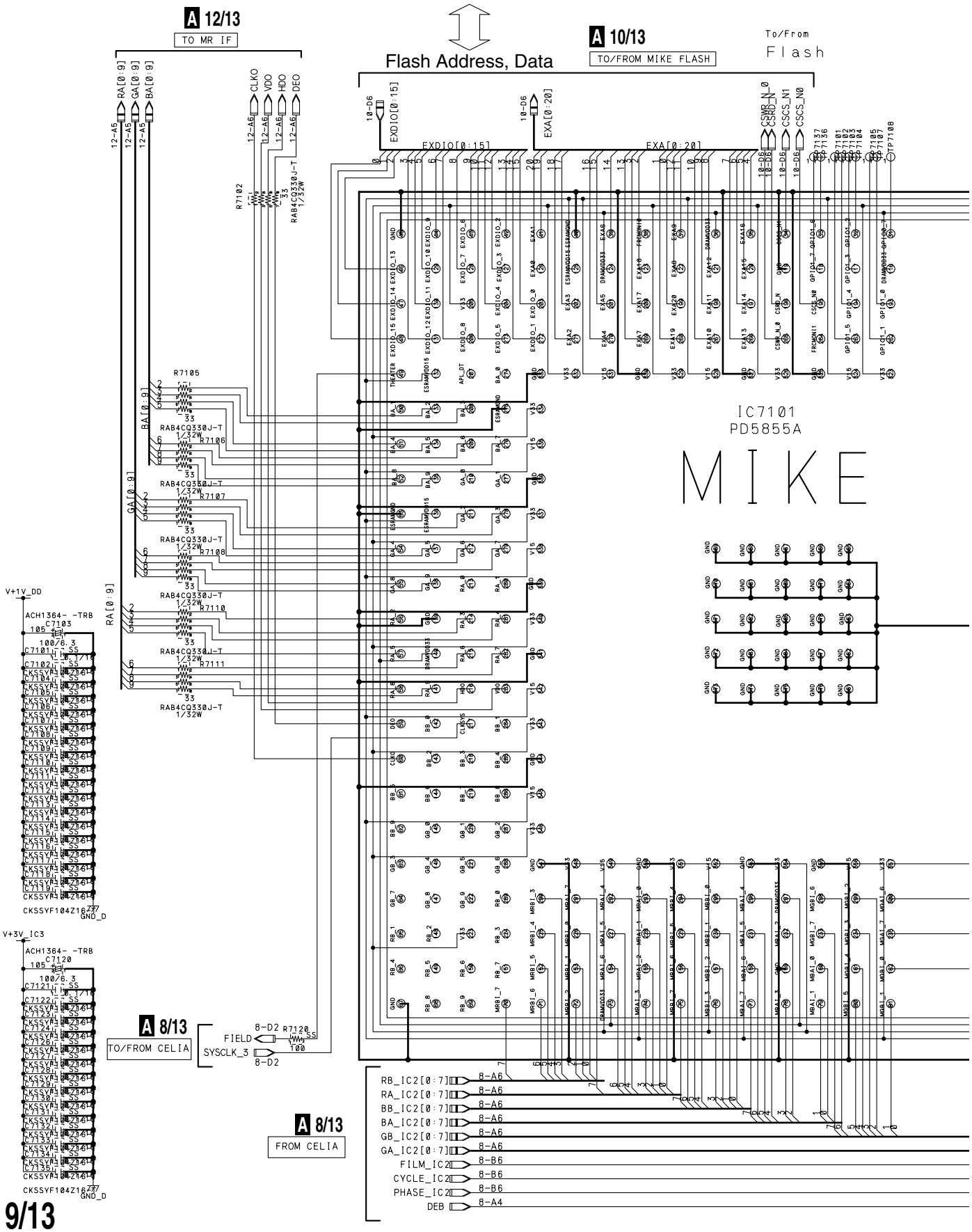


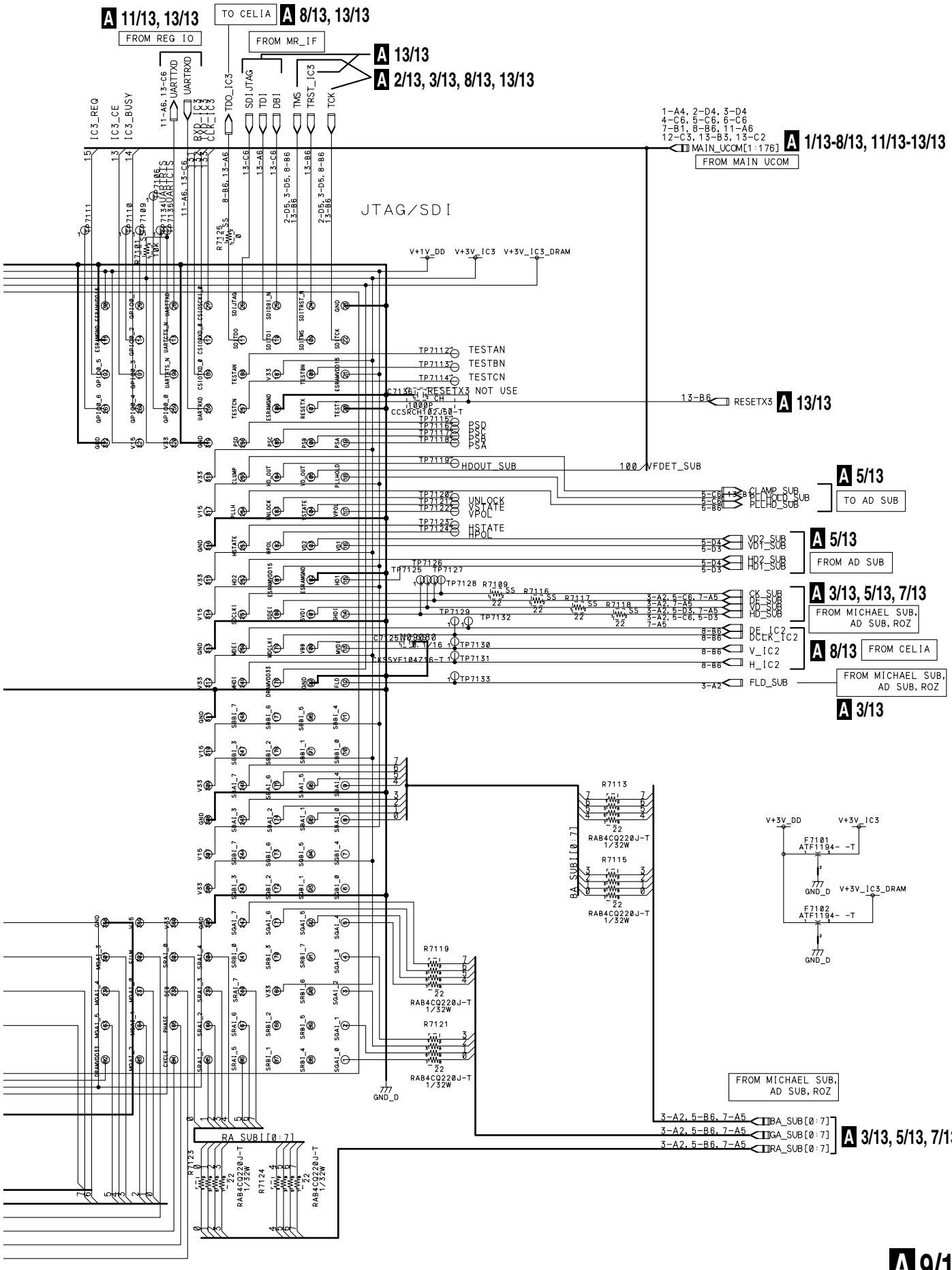

IC7004
PE5362A
CELIA
I/P
TO MIKE
A 9/13
A 1/13-7/13, 9/13, 11/13-13/13
A 2/13, 3/13, 9/13, 13/13
A 9/13
A 3/13
A 2/13, 3/13, 13/13
A 13/13
A 4/13
A 4/13
TO AD MAIN
A 2/13, 4/13, 7/13
FROM MICHAEL MAIN, AD MAIN, ROZ
A 2/13, 4/13, 7/13, 11/13
A 8/13
FROM REG IO
FROM MIKE
FROM AD MAIN
MAIN_UCOM[1:176]
RB_IC2[0:7]
RA_IC2[0:7]
BB_IC2[0:7]
BA_IC2[0:7]
GB_IC2[0:7]
GA_IC2[0:7]
GA_MAIN[0:7]
BA_MAIN[0:7]

3.11 MR MAIN BOARD ASSY (9/13)

A 9/13 MR MAIN BOARD ASSY (AWV2157)

● **MIKE BLOCK**

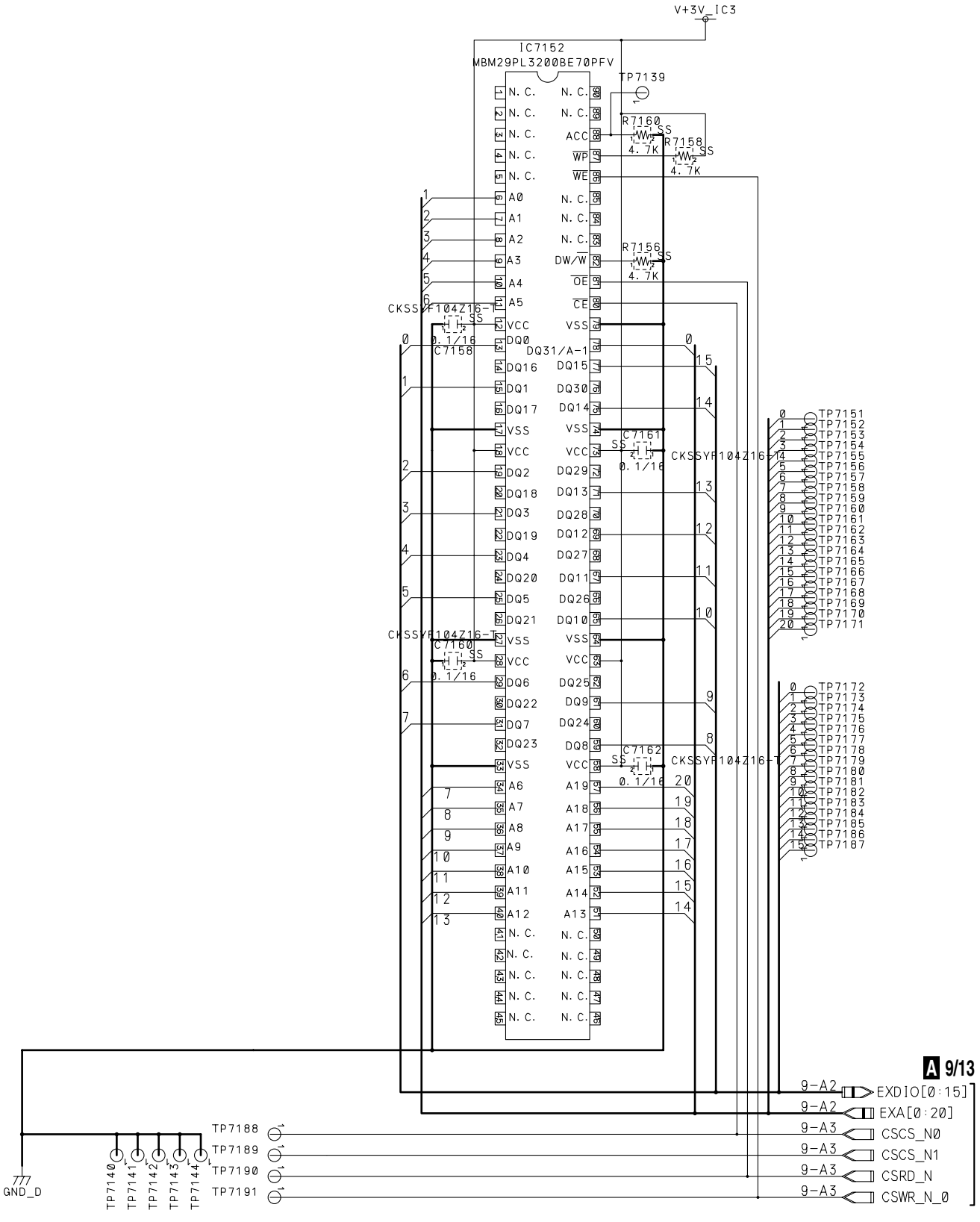



A 11/13, 13/13
FROM REG IO
TO CELIA
A 8/13, 13/13
FROM MR_IF
A 13/13
A 2/13, 3/13, 8/13, 13/13
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-B1, 8-B6, 11-A6
12-C3, 13-B3, 13-C2
MAIN_UCOM[1:176]
A 1/13-8/13, 11/13-13/13
FROM MAIN UCOM
JTAG/SDI
V+1V_DD
V+3V_IC3
V+3V_IC3_DRAM
TESTAN
TESTBN
TESTCN
RESETX3 NOT USE
13-B6
RESETX3
A 13/13
HDOUT_SUB
100
VFDET_SUB
A 5/13
TO AD SUB
CLAMP_SUB
PLLHOLD_SUB
VUNLOCK
VSTATE
VPOL
HSTATE
HPOL
VD2_SUB
VD1_SUB
HD2_SUB
HD1_SUB
A 5/13
FROM AD SUB
A 3/13, 5/13, 7/13
FROM MICHAEL SUB, AD SUB, ROZ
CK_SUB
DE_SUB
VD_SUB
HD_SUB
DE_IC2
DCLK_IC2
V_IC2
H_IC2
A 8/13
FROM CELIA
FLD_SUB
FROM MICHAEL SUB, AD SUB, ROZ
A 3/13
RA_SUB[0:7]
GA_SUB[0:7]
BA_SUB[0:7]
FROM MICHAEL SUB, AD SUB, ROZ
A 3/13, 5/13, 7/13
GND_D
A 9/13

3.12 MR MAIN BOARD ASSY (10/13)

A 10/13 MR MAIN BOARD ASSY (AWV2157)

● **MIKE FLASH BLOCK**



A 10/13

A

B

C

D

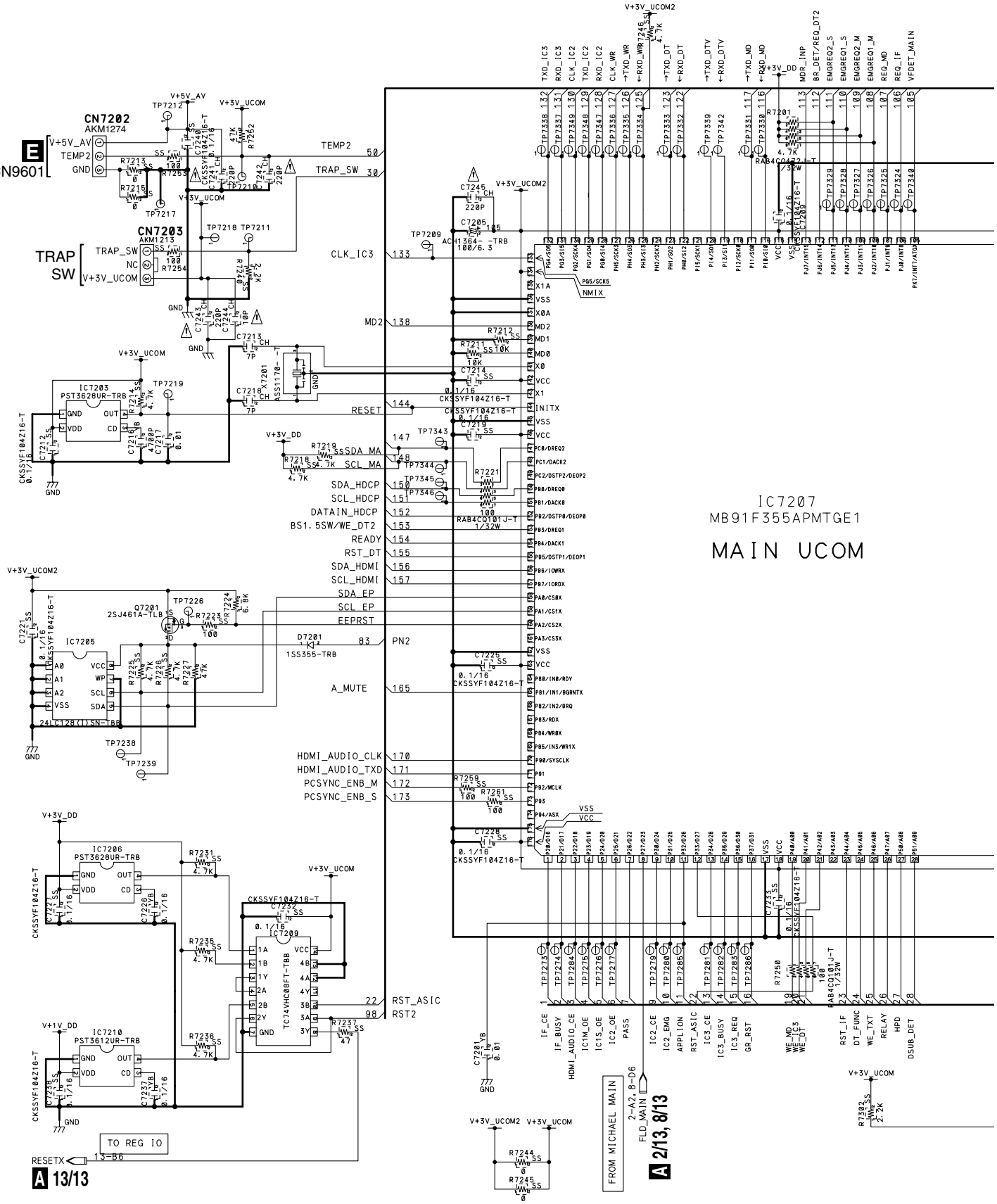
E

F

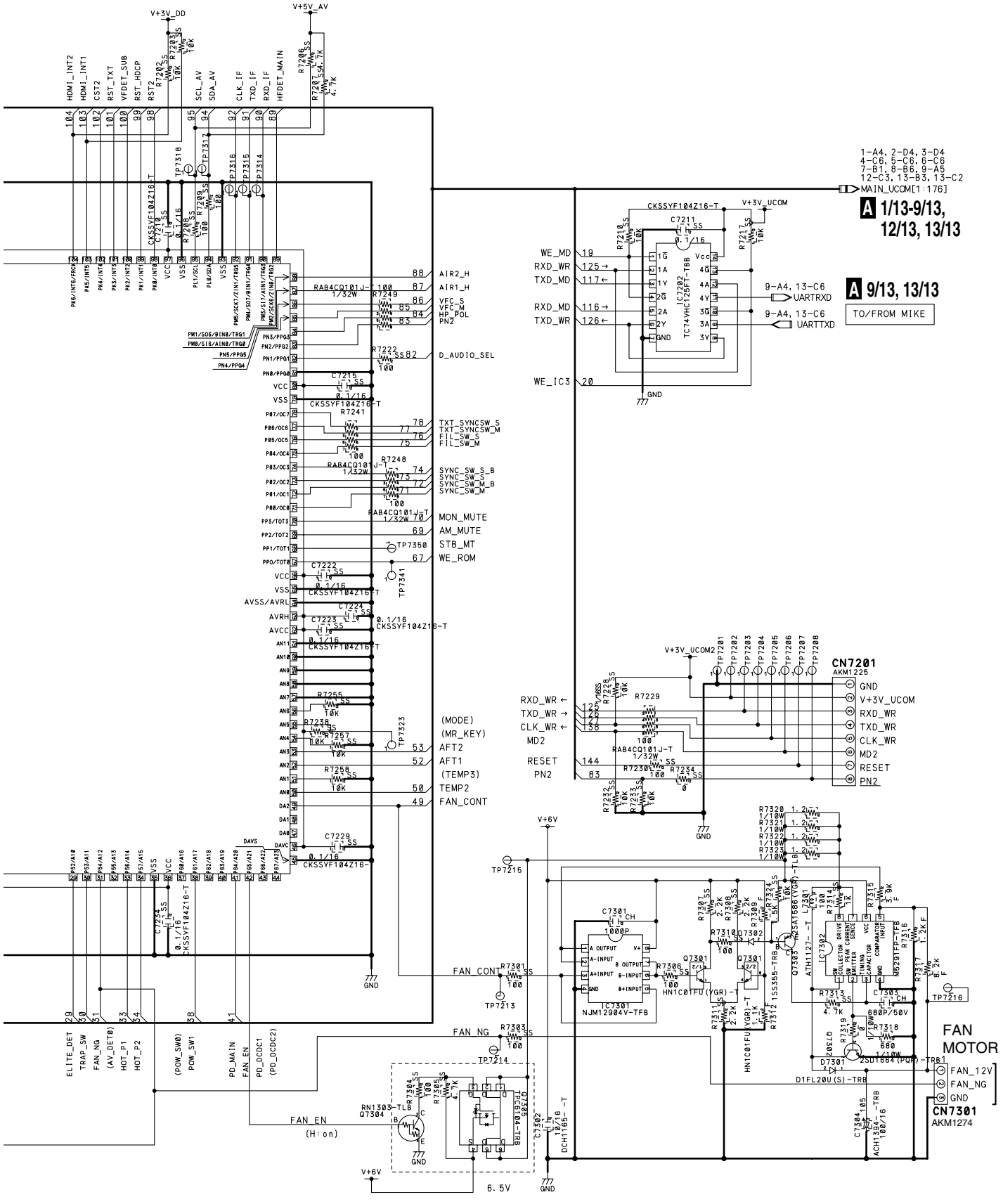
3.13 MR MAIN BOARD ASSY (11/13)

A 11/13 MR MAIN BOARD ASSY (AWV2157)

● **MAIN UCOM BLOCK**



A 11/13

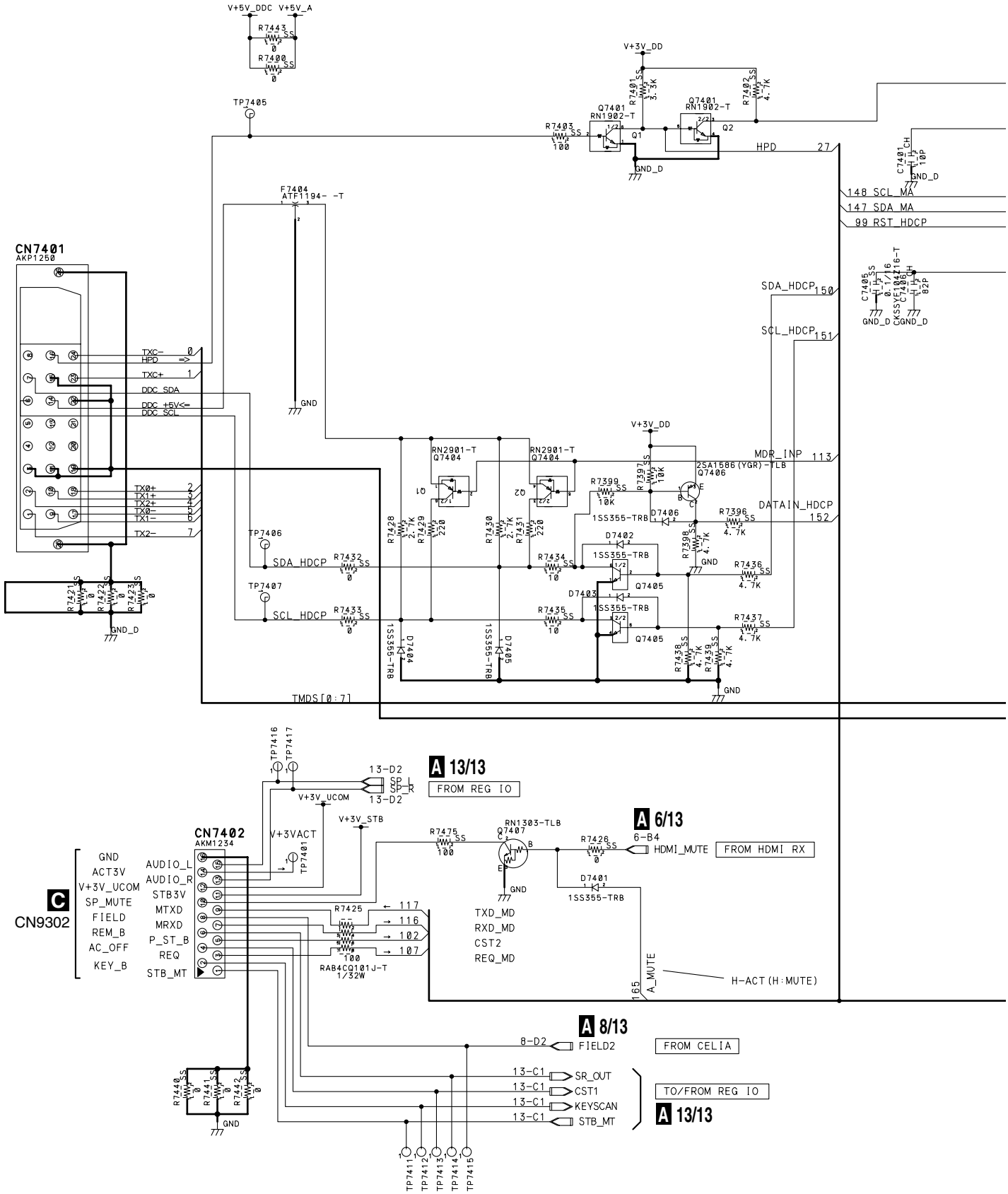

1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-B1, 8-B6, 9-A5
12-C3, 13-B3, 13-C2
MAIN_UCOM[1:176]
A 1/13-9/13, 12/13, 13/13
A 9/13, 13/13
TO/FROM MIKE
9-A4, 13-C6 UARTRXD
9-A4, 13-C6 UARTTXD
CN7201 AKM1225
GND
V+3V_UCOM
RXD_WR
TXD_WR
CLK_WR
MD2
RESET
PN2
CN7301 AKM1274
FAN_12V
FAN_NG
GND
FAN MOTOR
AIR2_H
AIR1_H
VFC_S
VFC_M
HP_POL
PN2
D_AUDIO_SEL
TXT_SYNCSW_S
TXT_SYNCSW_M
FIL_SW_S
FIL_SW_M
SYNC_SW_S_B
SYNC_SW_S
SYNC_SW_M_B
SYNC_SW_M
MON_MUTE
AM_MUTE
STB_MT
WE_ROM
(MODE)
(MR_KEY)
AFT2
AFT1
(TEMP3)
TEMP2
FAN_CONT
FAN_NG
FAN_EN
(H:on)
6.5V
V+3V_DD
V+5V_AV
V+3V_UCOM
V+6V
GND

A 11/13

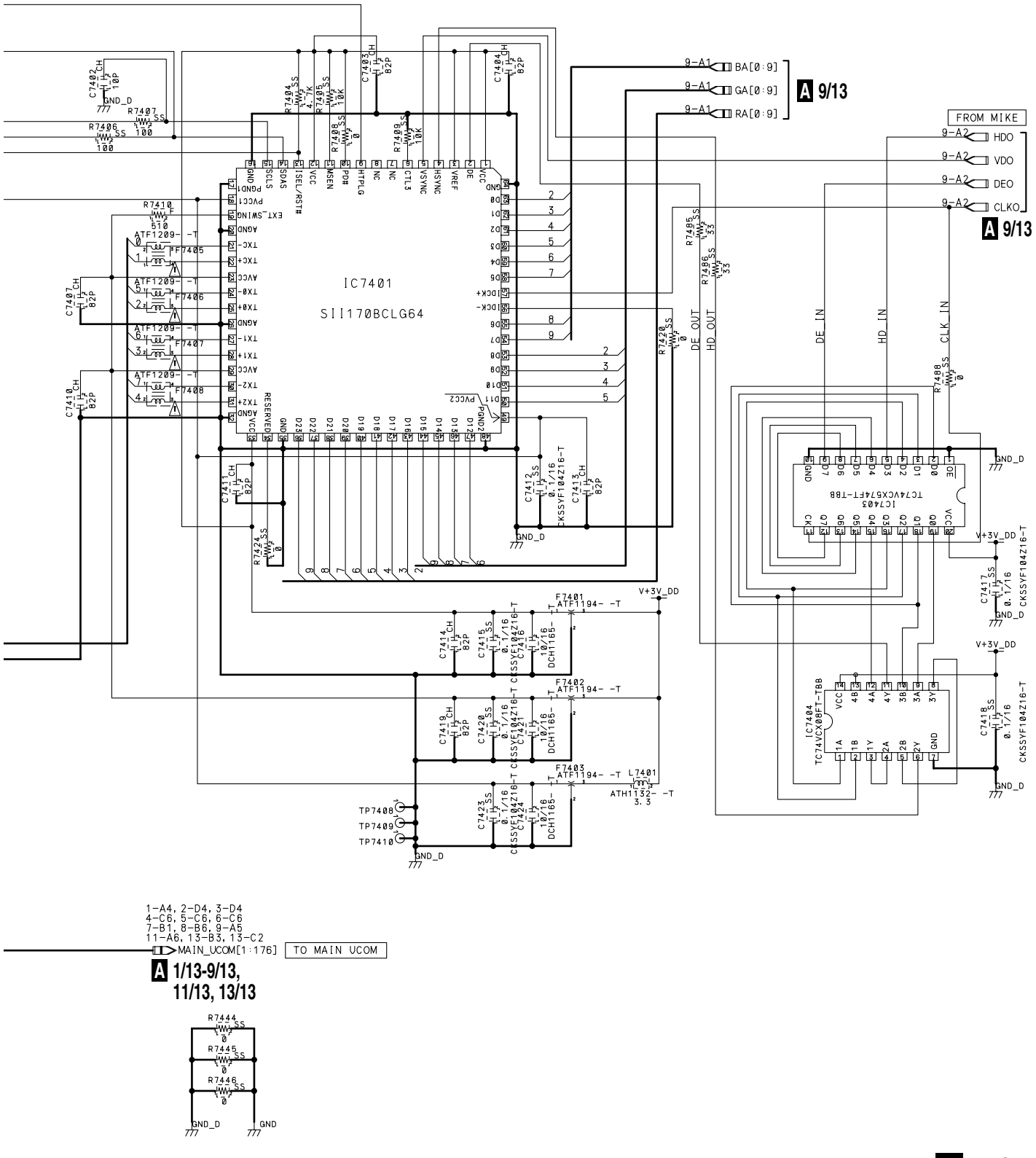
3.14 MR MAIN BOARD ASSY (12/13)

A 12/13 MR MAIN BOARD ASSY (AWV2157)

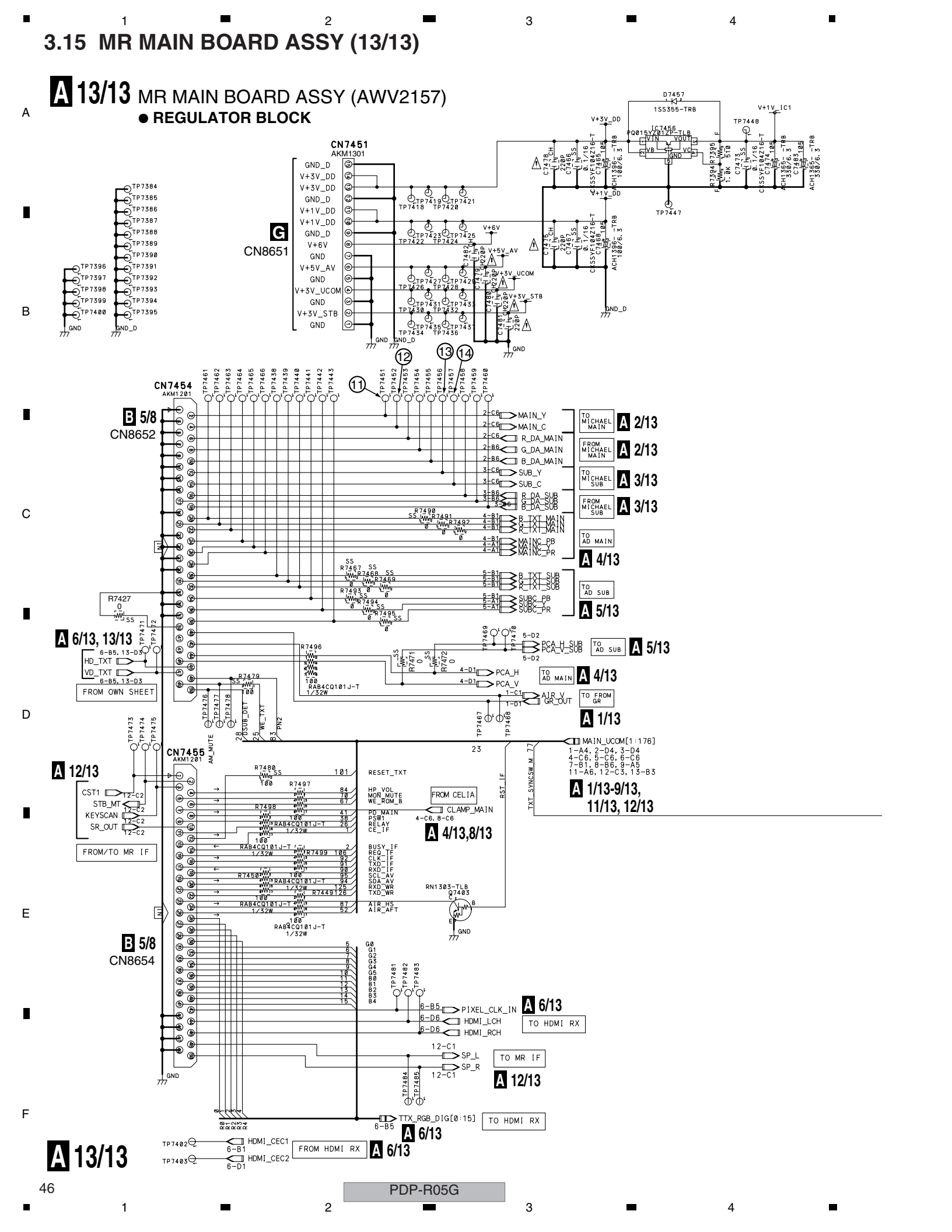
● **MR I/F BLOCK**

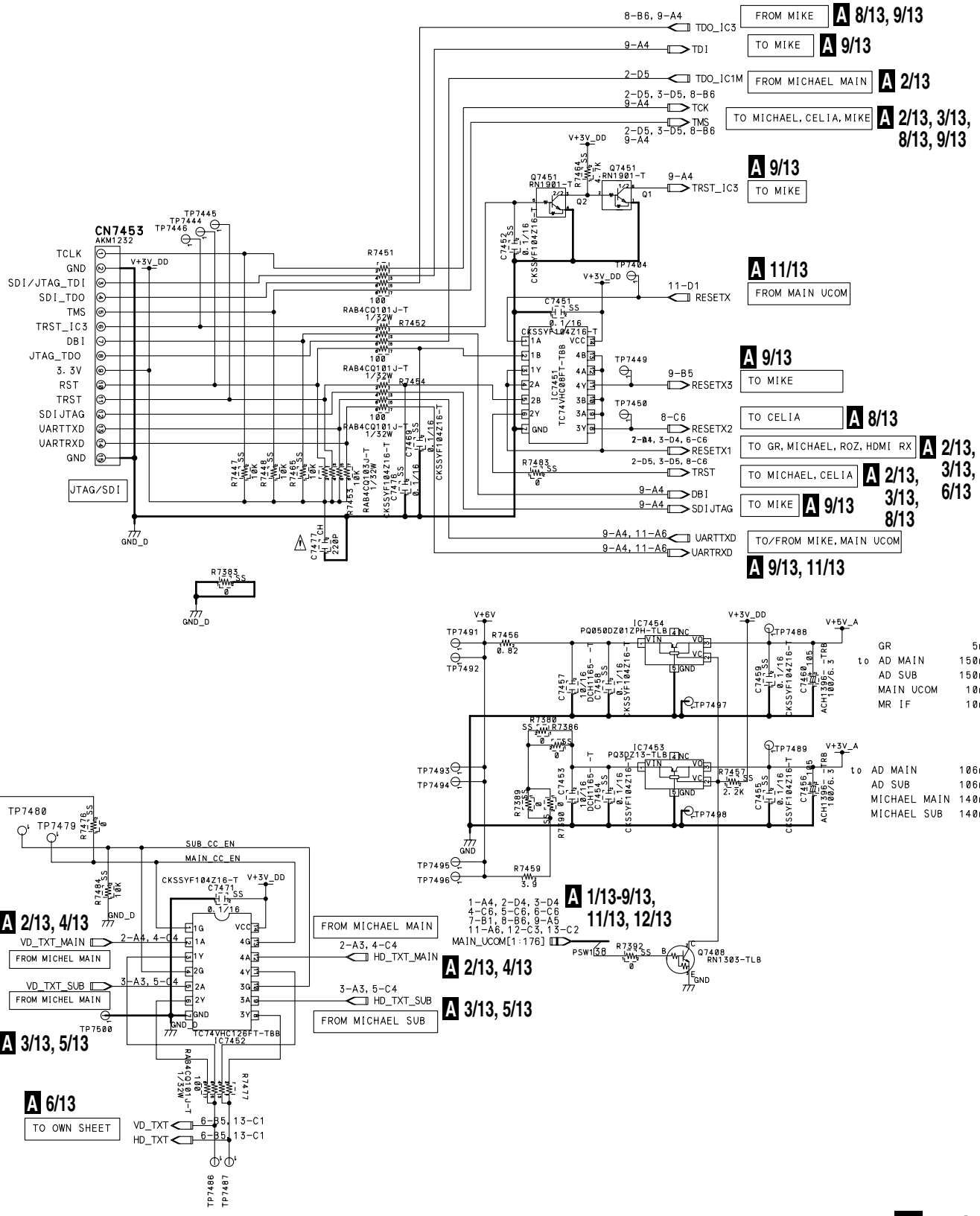


A 12/13


IC7401
SII170BCLG64
9-A1 BA[0:9]
9-A1 GA[0:9]
9-A1 RA[0:9]
A 9/13
FROM MIKE
9-A2 HDO
9-A2 VDO
9-A2 DEO
9-A2 CLKO
A 9/13
DE_IN
HD_IN
CLK_IN
DE_OUT
HD_OUT
IC7403
TC74VCX574FT-TBB
IC7404
TC74VCX08FT-TBB
V+3V_DD
GND_D
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-B1, 8-B6, 9-A5
11-A6, 13-B3, 13-C2
MAIN_UCOM[1:176]
TO MAIN UCOM
A 1/13-9/13, 11/13, 13/13
A 12/13

3.15 MR MAIN BOARD ASSY (13/13)

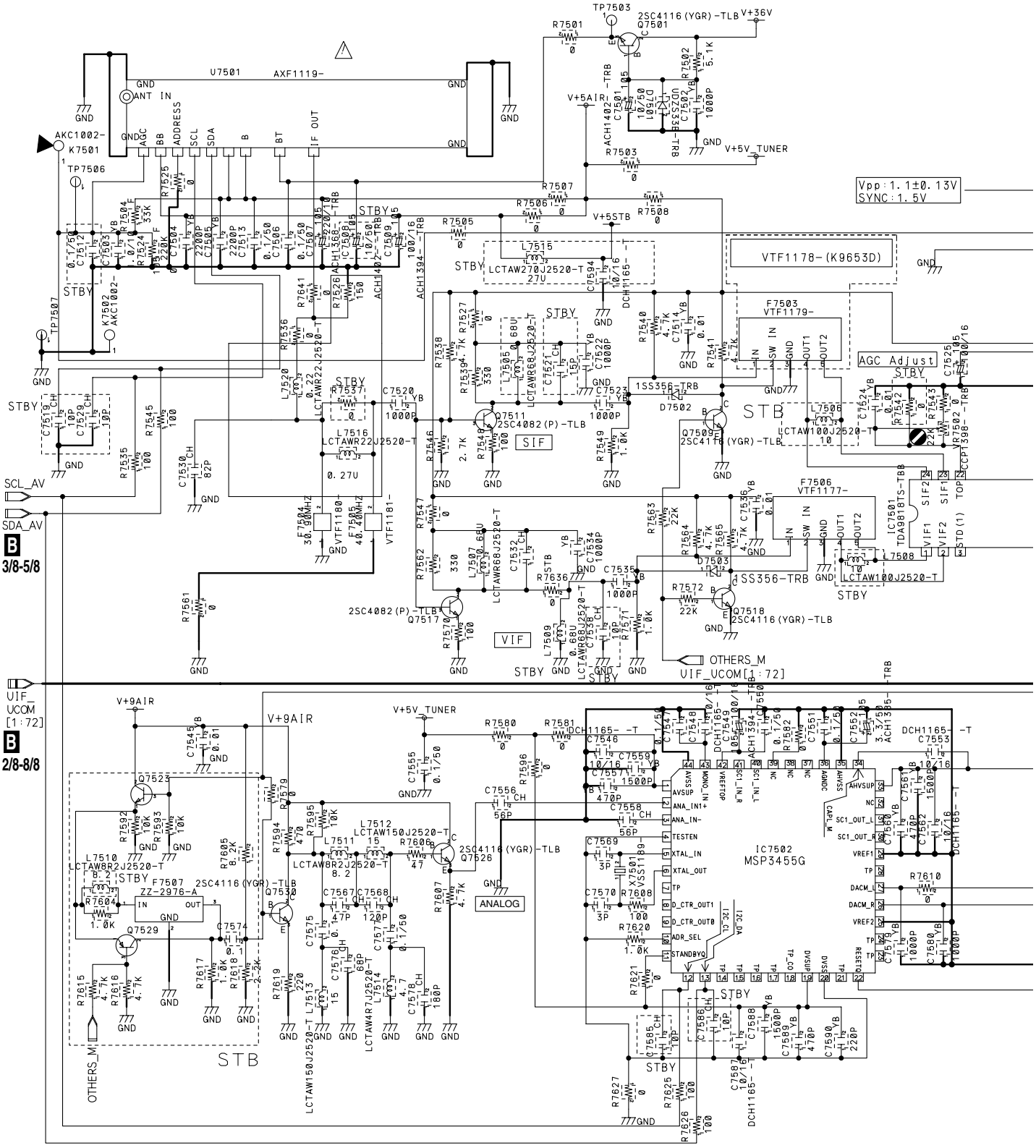



CN7453
AKM1232
TCLK
GND
SDI/JTAG_TDI
SDI_TDO
TMS
TRST_IC3
DBI
JTAG_TDO
3.3V
RST
TRST
SDIJTAG
UARTTXD
UARTRXD
GND
JTAG/SDI
V+3V_DD
GND_D
8-B6, 9-A4 TDO_IC3
9-A4 TDI
2-D5 TDO_IC1M
2-D5, 3-D5, 8-B6 9-A4 TCK
TMS
2-D5, 3-D5, 8-B6 9-A4
9-A4 TRST_IC3
11-D1 RESETX
9-B5 RESETX3
8-C6 RESETX2
2-D4, 3-D4, 6-C6 RESETX1
2-D5, 3-D5, 8-C6 TRST
9-A4 DBI
9-A4 SDIJTAG
9-A4, 11-A6 UARTTXD
9-A4, 11-A6 UARTRXD
FROM MIKE A 8/13, 9/13
TO MIKE A 9/13
FROM MICHAEL MAIN A 2/13
TO MICHAEL, CELIA, MIKE A 2/13, 3/13, 8/13, 9/13
A 9/13 TO MIKE
A 11/13 FROM MAIN UCOM
A 9/13 TO MIKE
TO CELIA A 8/13
TO GR, MICHAEL, ROZ, HDMI RX A 2/13, 3/13, 6/13
TO MICHAEL, CELIA A 2/13, 3/13, 8/13
TO MIKE A 9/13
TO/FROM MIKE, MAIN UCOM
A 9/13, 11/13
GR 5mA
to AD MAIN 150mA
AD SUB 150mA
MAIN UCOM 10mA
MR IF 10mA
to AD MAIN 106mA
AD SUB 106mA
MICHAEL MAIN 140mA
MICHAEL SUB 140mA
1-A4, 2-D4, 3-D4 4-C6, 5-C6, 6-C6 7-B1, 8-B6, 9-A5 11-A6, 12-C3, 13-C2 MAIN_UCOM[1:176]
A 1/13-9/13, 11/13, 12/13
SUB_CC_EN
MAIN_CC_EN
A 2/13, 4/13
VD_TXT_MAIN 2-A4, 4-C4
FROM MICHEL MAIN
VD_TXT_SUB 3-A3, 5-C4
FROM MICHEL MAIN
A 3/13, 5/13
FROM MICHAEL MAIN
2-A3, 4-C4 HD_TXT_MAIN
A 2/13, 4/13
3-A3, 5-C4 HD_TXT_SUB
A 3/13, 5/13
FROM MICHAEL SUB
A 6/13
TO OWN SHEET
VD_TXT 6-B5, 13-C1
HD_TXT 6-B5, 13-C1
A 13/13

3.16 AV BOARD ASSY (1/8)

B 1/8 AV BOARD ASSY (AWZ6982)

● **TUNER BLOCK**



NOTE

RESISTOR Ω

RS1/16S***J-T

CAPACITORS μF

CKSRYF***Z**-T

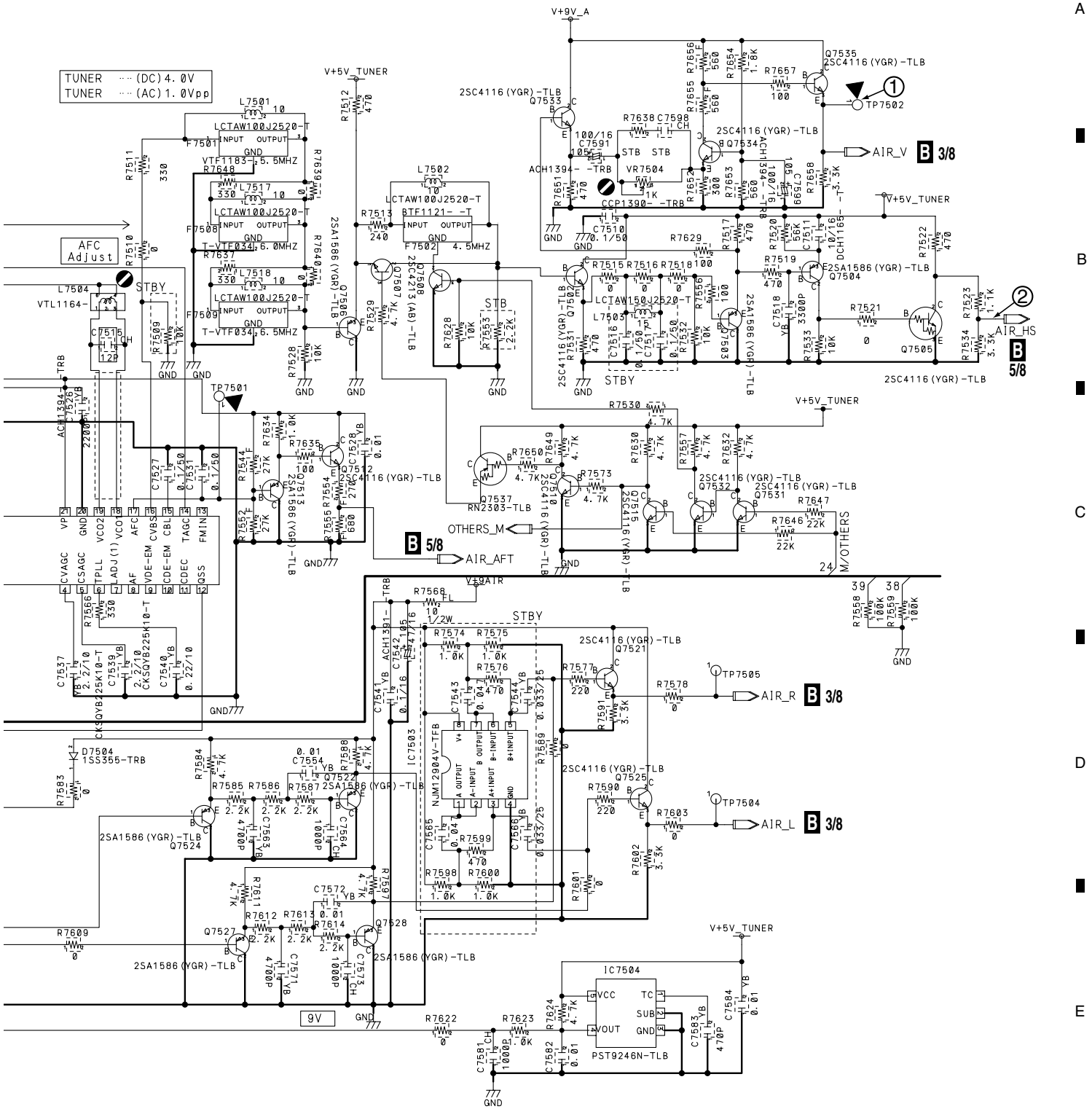
CKSRYB***K**-T

CCSRCH***J**-T

CEVW***M**-TRB

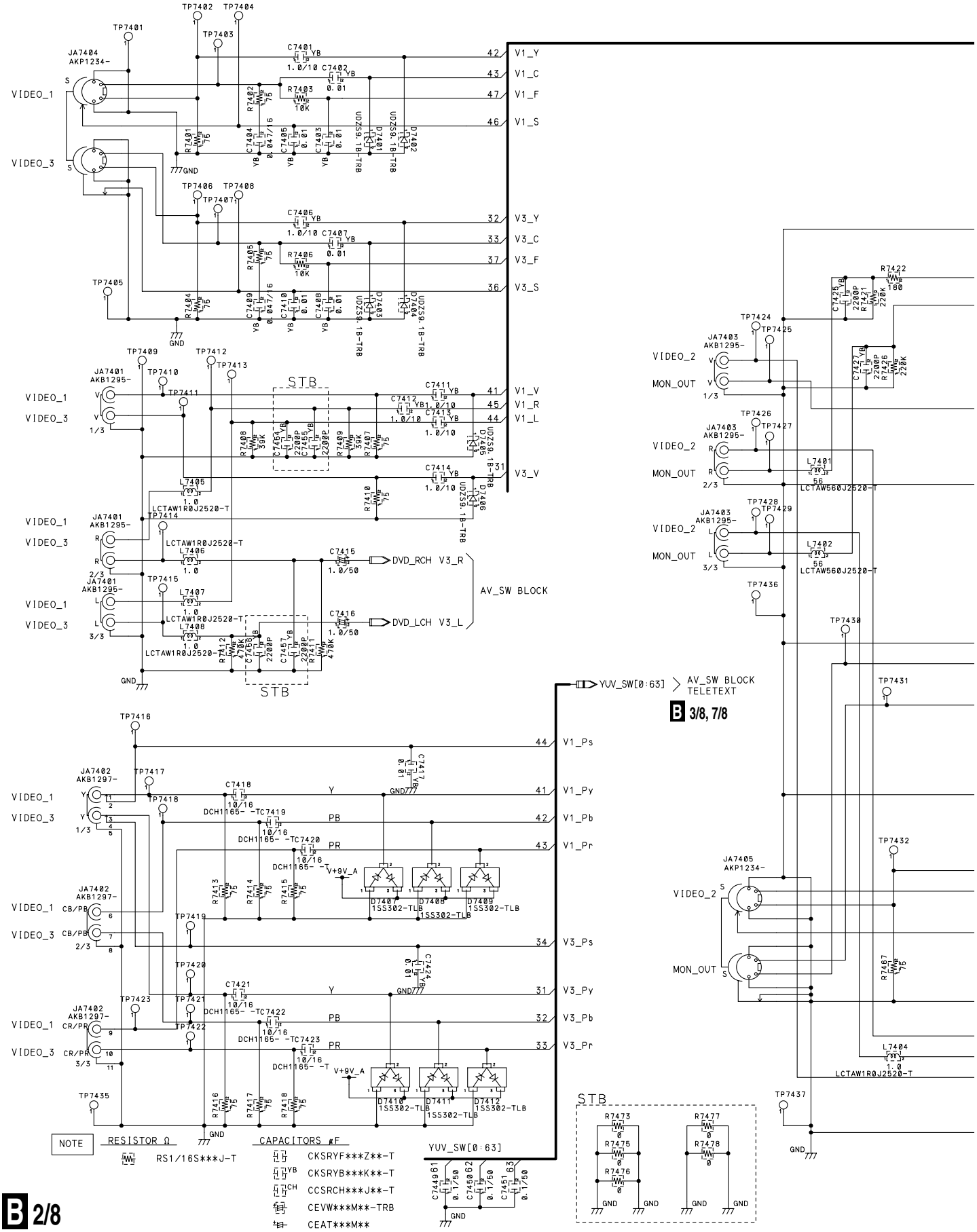
CEAT***M**

B 1/8

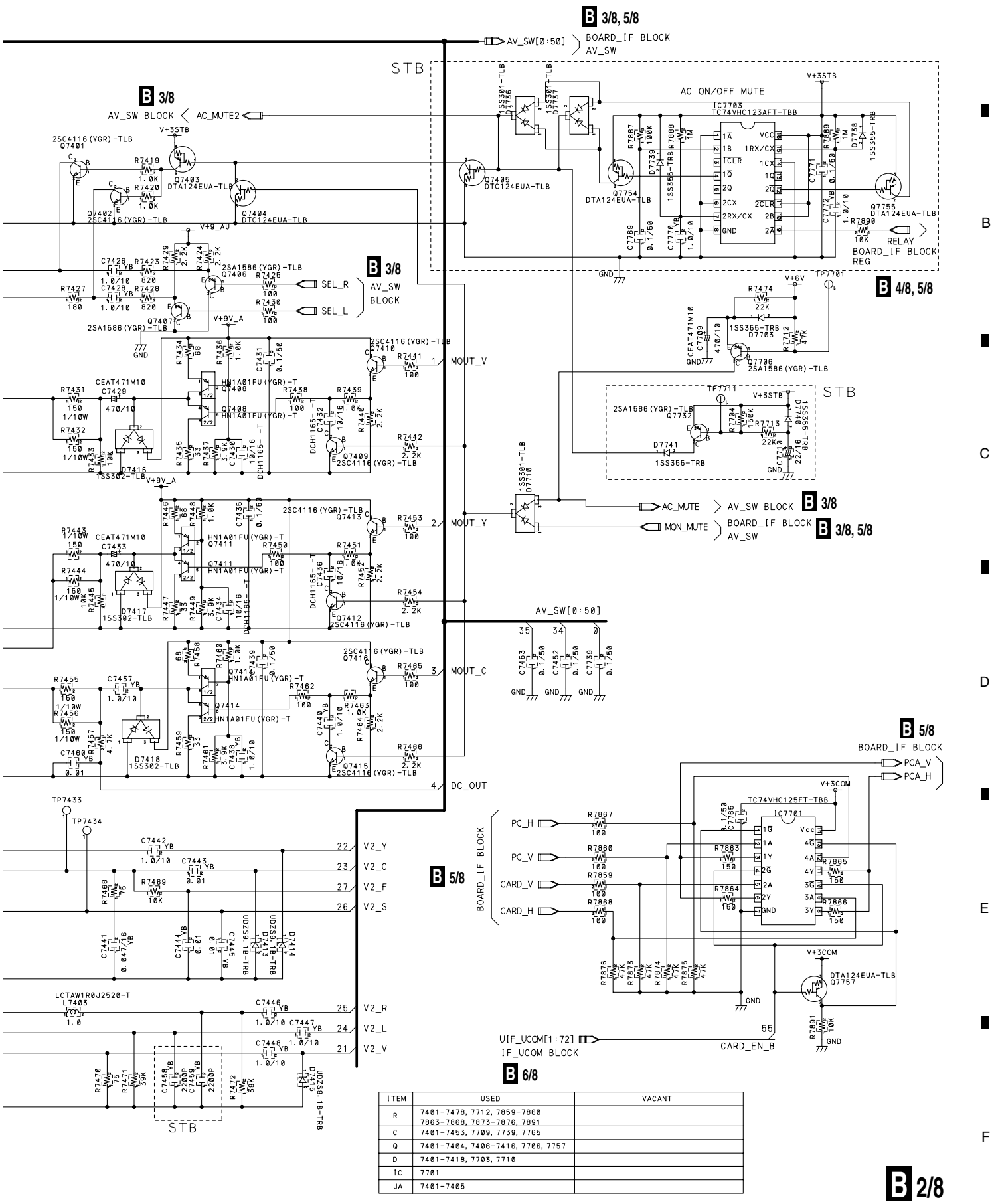

TUNER ···(DC)4.0V
TUNER ···(AC)1.0Vpp
AFC Adjust
STBY
STB
V+5V_TUNER
V+9V_A
V+9AIR
9V
GND
GND777
OTHERS_M
AIR_AFT
AIR_V
AIR_R
AIR_L
AIR_HS
B 3/8
B 5/8
TP7501
TP7502
TP7504
TP7505
L7501
L7502
L7503
L7504
F7501
F7502
F7503
F7504
F7505
F7506
F7507
F7508
F7509
IC7503
IC7504
Q7501
Q7502
Q7503
Q7504
Q7505
Q7506
Q7507
Q7508
Q7509
Q7510
Q7511
Q7512
Q7513
Q7514
Q7515
Q7516
Q7517
Q7518
Q7519
Q7520
Q7521
Q7522
Q7523
Q7524
Q7525
Q7526
Q7527
Q7528
Q7529
Q7530
Q7531
Q7532
Q7533
Q7534
Q7535
Q7536
Q7537
D7504
1SS355-TRB
LCTAW100J2520-T
VTF1183-, 5.5MHZ
T-VTF034, 6.0MHZ
T-VTF034, 6.5MHZ
BTF1121- -T
4.5MHZ
CCP1390- -TRB
ACH1394- -TRB
ACH1394- -TRB
VTL1164-
RN2303-TLB
N.JM12904V-TFB
PST9246N-TLB
2SA1586(YGR)-TLB
2SC4116(YGR)-TLB
2SC4116(YGR)-TLB
2SA1586(YGR)-TLB
2SC4116(YGR)-TLB
2SA1586(YGR)-TLB
2SC4116(YGR)-TLB
2SC4116(YGR)-TLB
2SC4116

3.17 AV BOARD ASSY (2/8)

B 2/8 AV BOARD ASSY (AWZ6982) ● AV I/O BLOCK

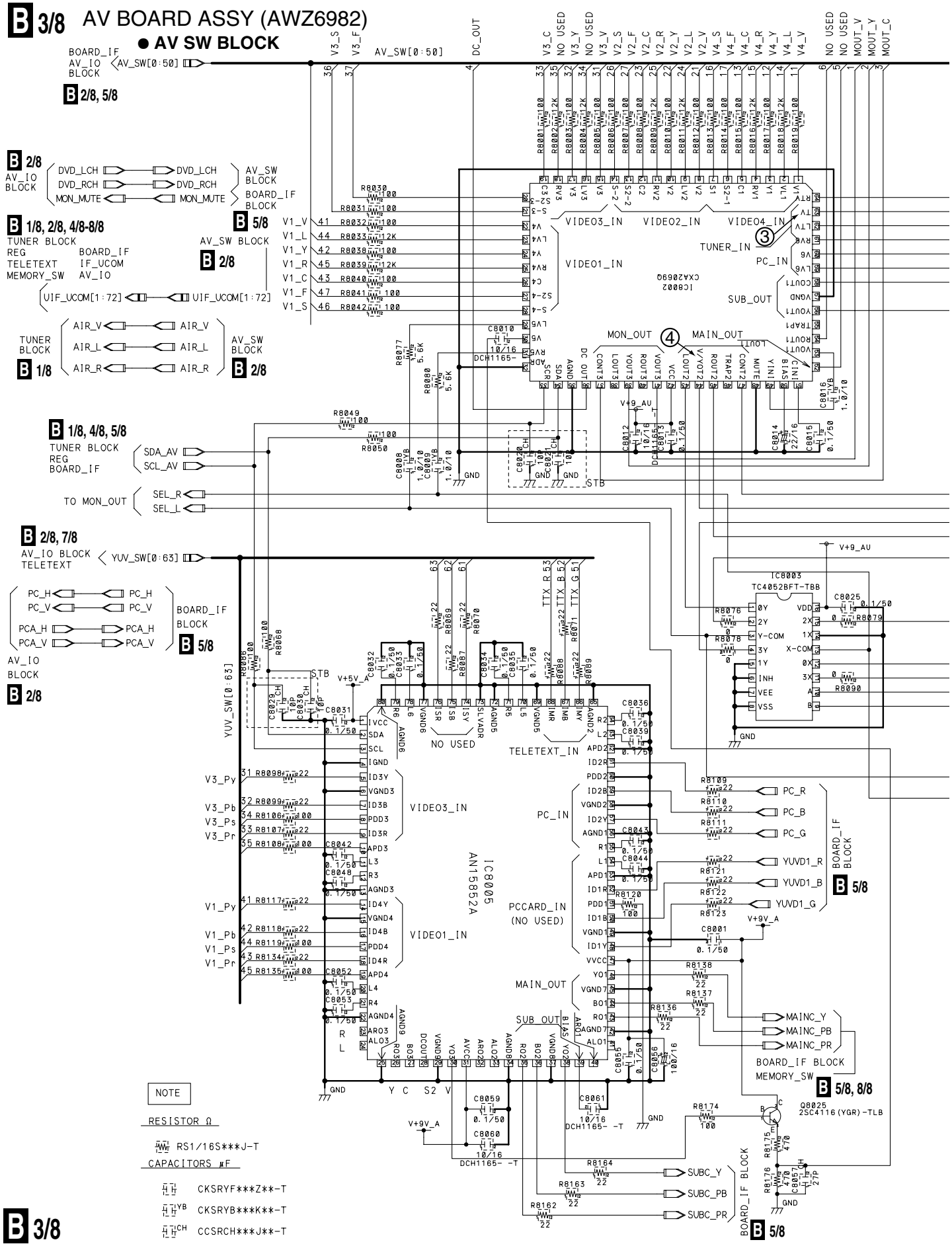


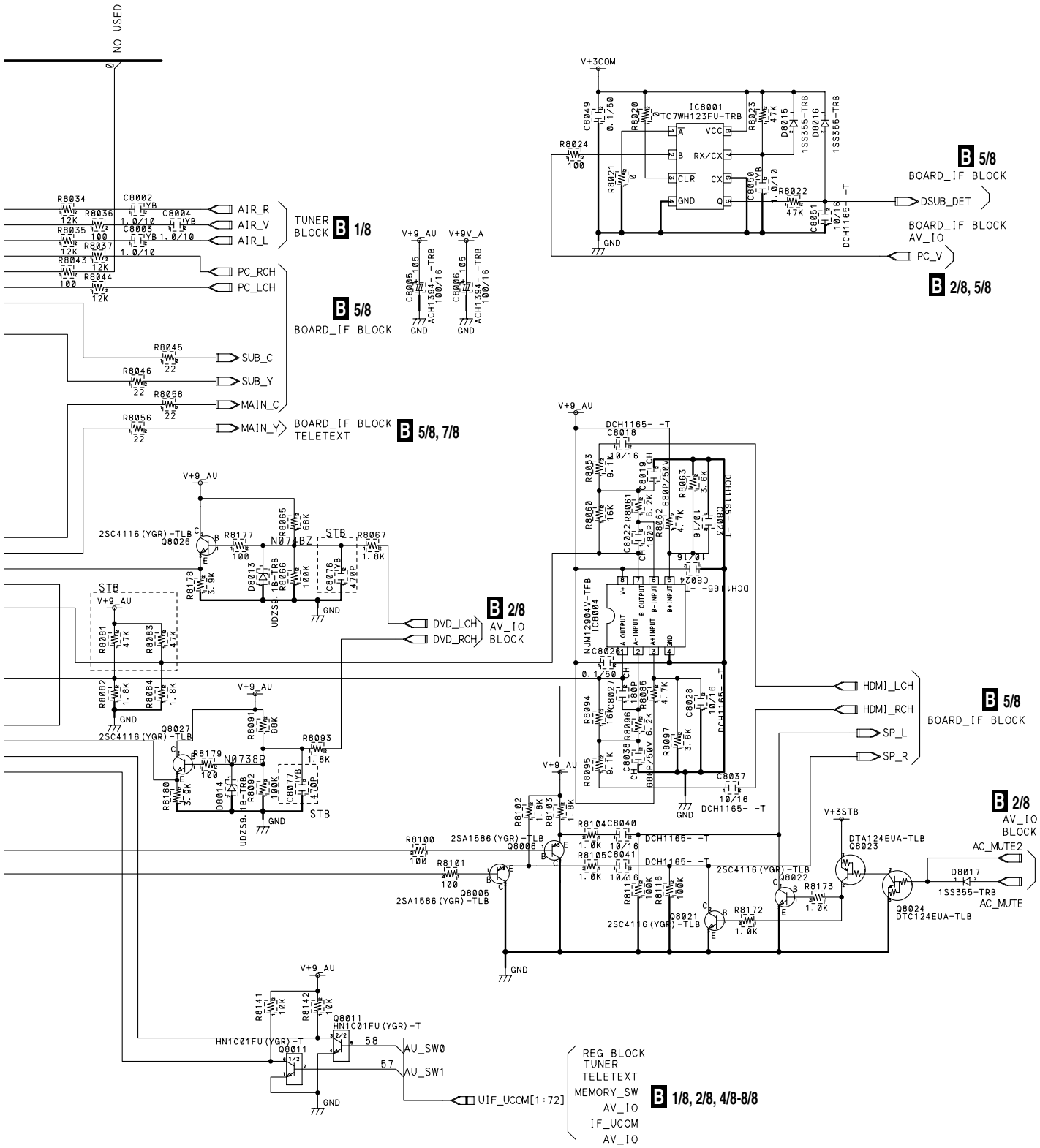
B 2/8



ITEM	USED	VACANT
R	7401-7478, 7712, 7859-7860 7863-7868, 7873-7876, 7891	
C	7401-7453, 7709, 7739, 7765	
Q	7401-7404, 7406-7416, 7706, 7757	
D	7401-7418, 7703, 7710	
IC	7701	
JA	7401-7405	

3.18 AV BOARD ASSY (3/8)



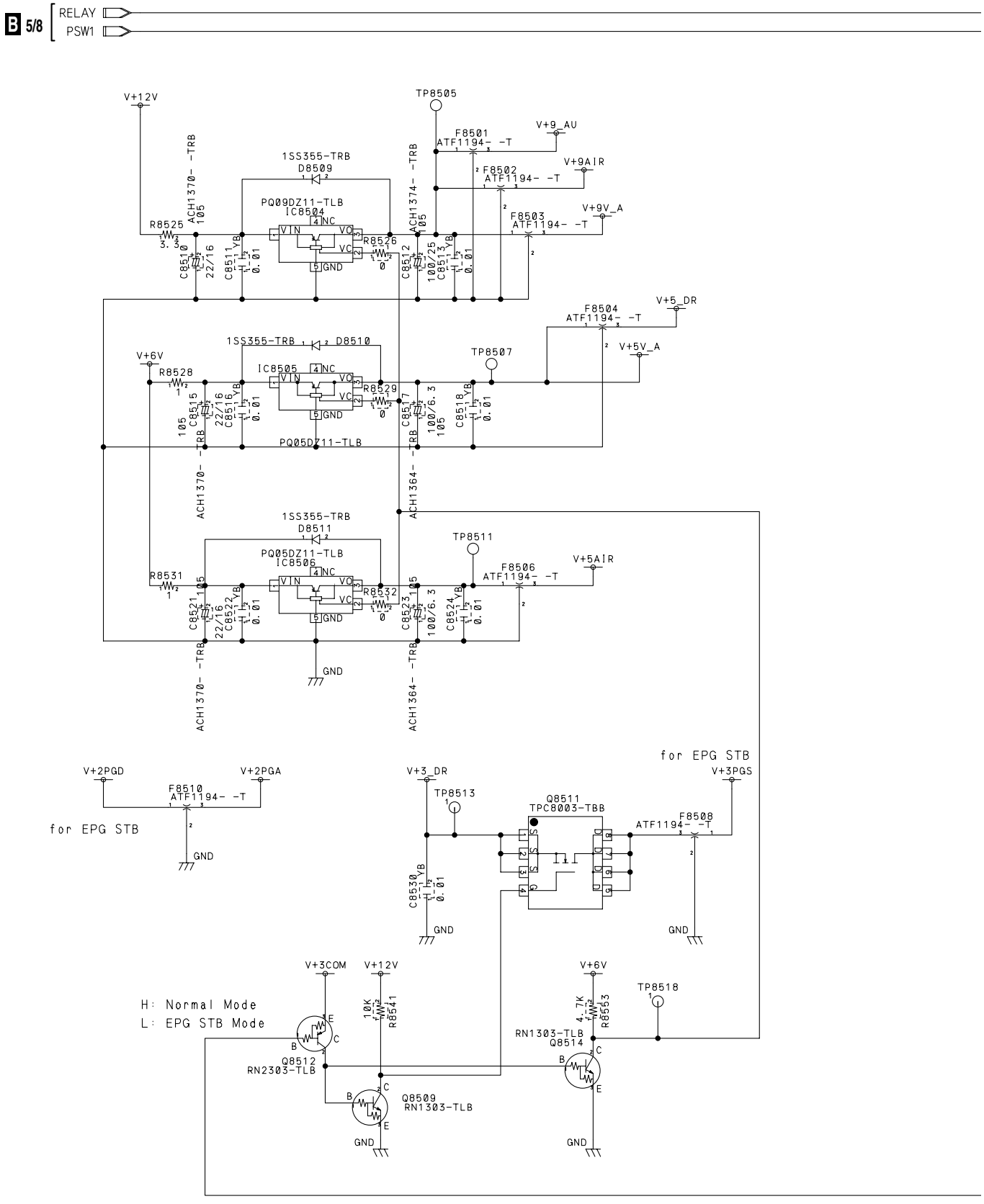


ITEM	USED	VACANT
R	8001-8024, 8030-8046, 8049-8050, 8053, 8056, 8058, 8060-8063, 8065-8071, 8076-8080, 8082, 8084-8111, 8115-8123, 8134-8138, 8141-8142, 8162-8164, 8172-8180	
C	8001-8006, 8008-8010, 8012-8016, 8018-8019, 8022-8028, 8031-8044, 8048-8053, 8055-8057, 8059-8061, 8079-8077	
Q	8005-8006, 8011, 8021-8027	
D	8013-8017	
IC	8001-8005	

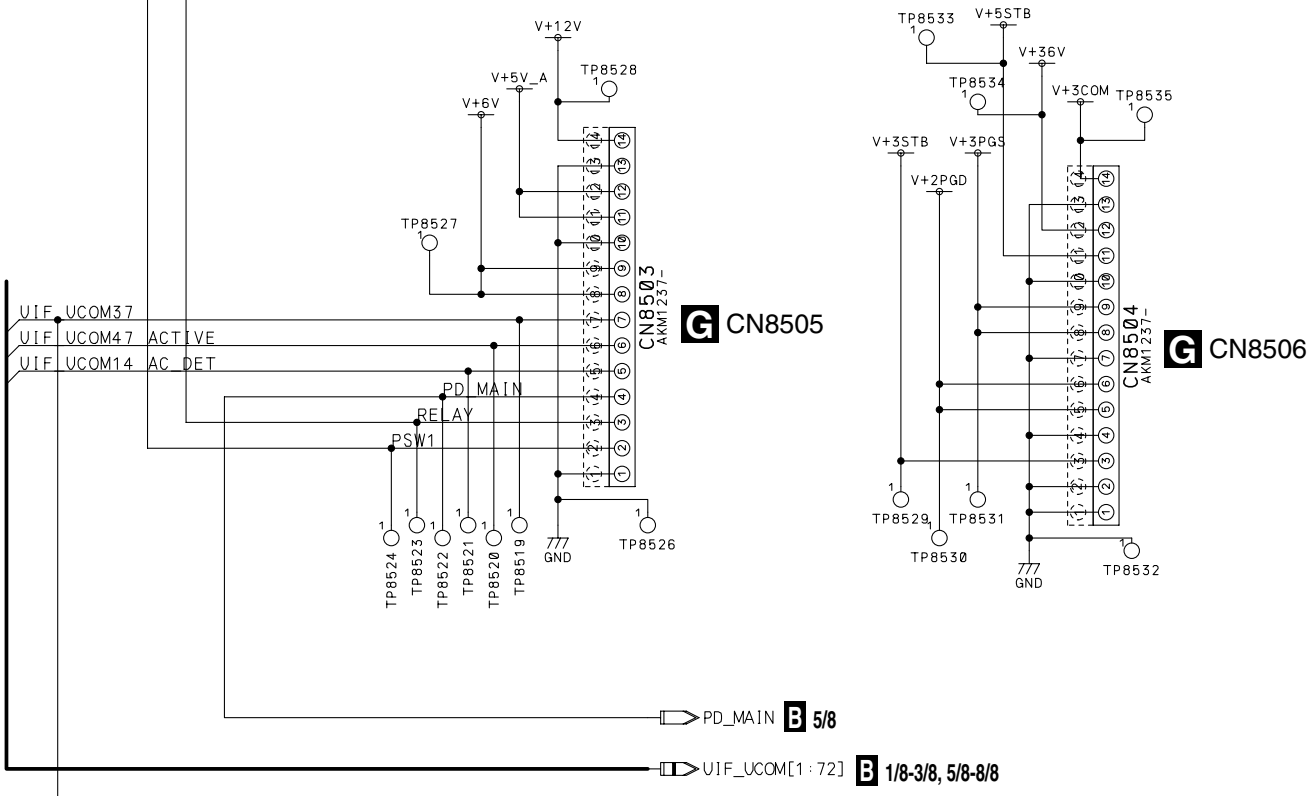
3.19 AV BOARD ASSY (4/8)

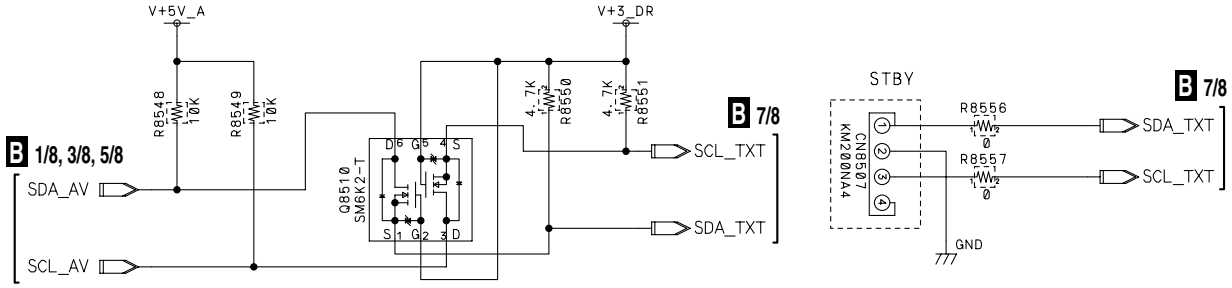
B 4/8 AV BOARD ASSY (AWZ6982)

● **AV_REG BLOCK**



B 4/8





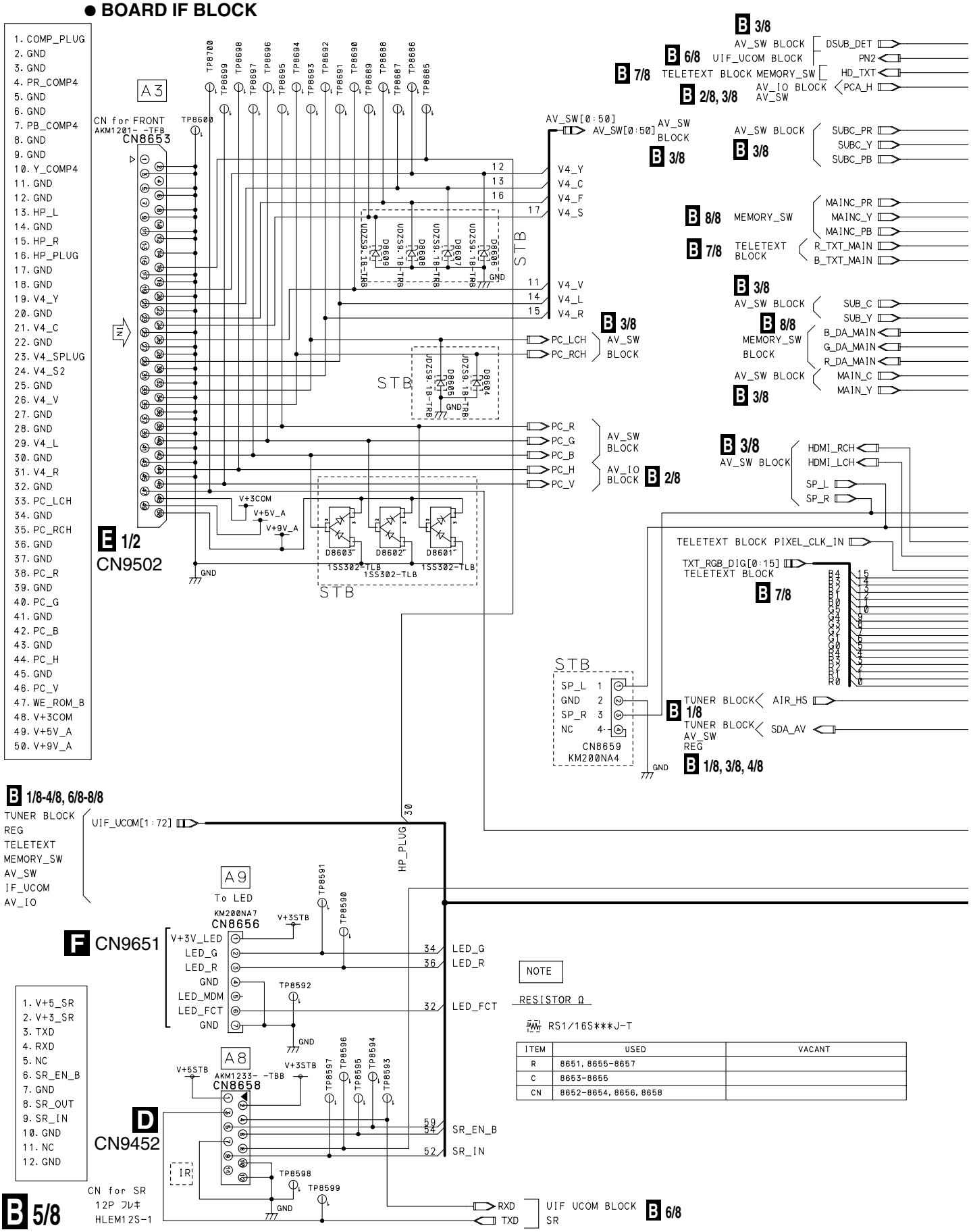
ITEM	USED	VACANT
R	8525-8532, 8541 8548-8554	8527, 8530, 8552
C	8510-8513, 8515-8518 8521-8524, 8530	
Q	8509-8512, 8514	
D	8509-8511	
IC	8504-8506	
F	8501-8504, 8506 8508, 8510	
CN	8503, 8504	

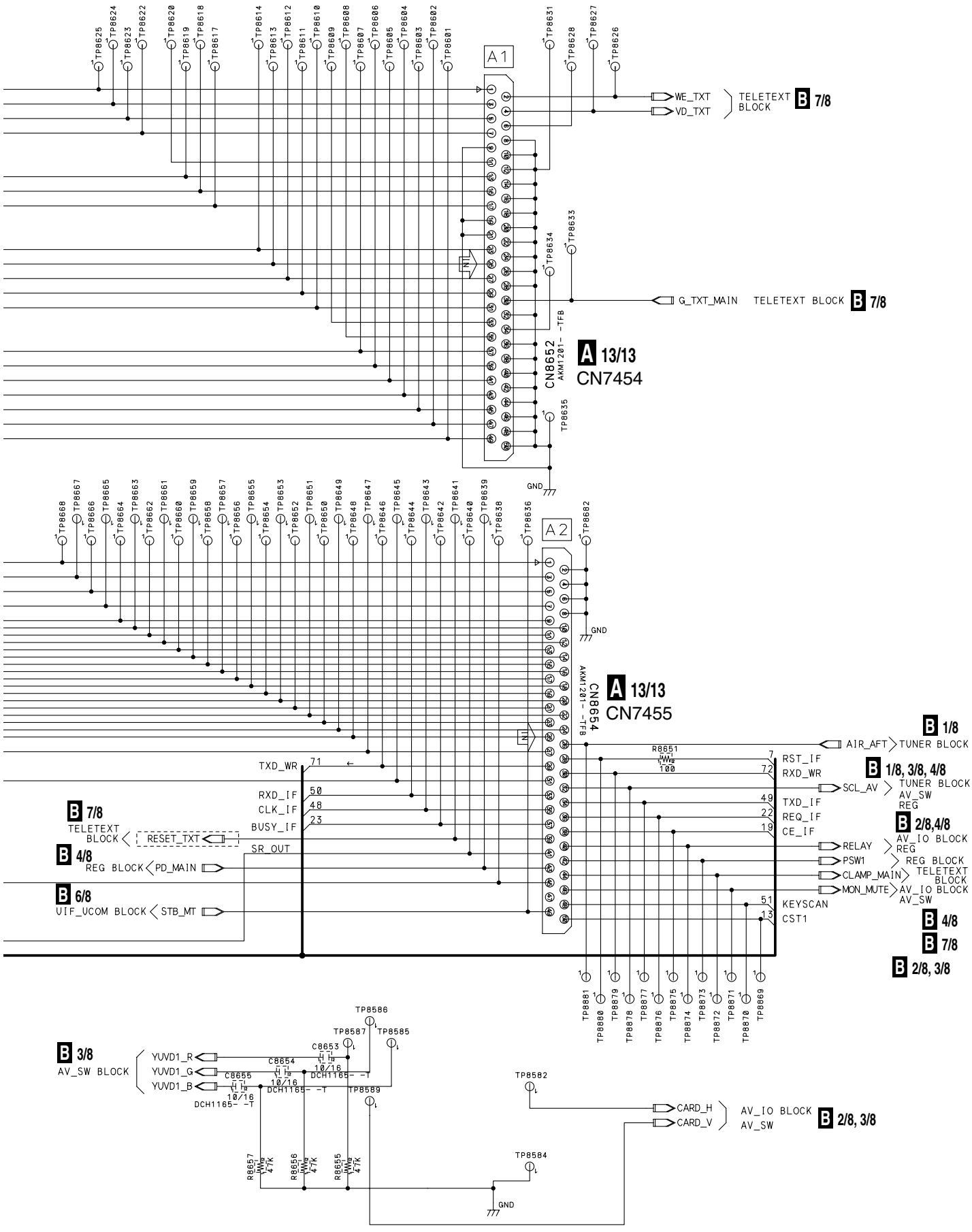
B 4/8

3.20 AV BOARD ASSY (5/8)

B 5/8 AV BOARD ASSY (AWZ6982)

● **BOARD IF BLOCK**

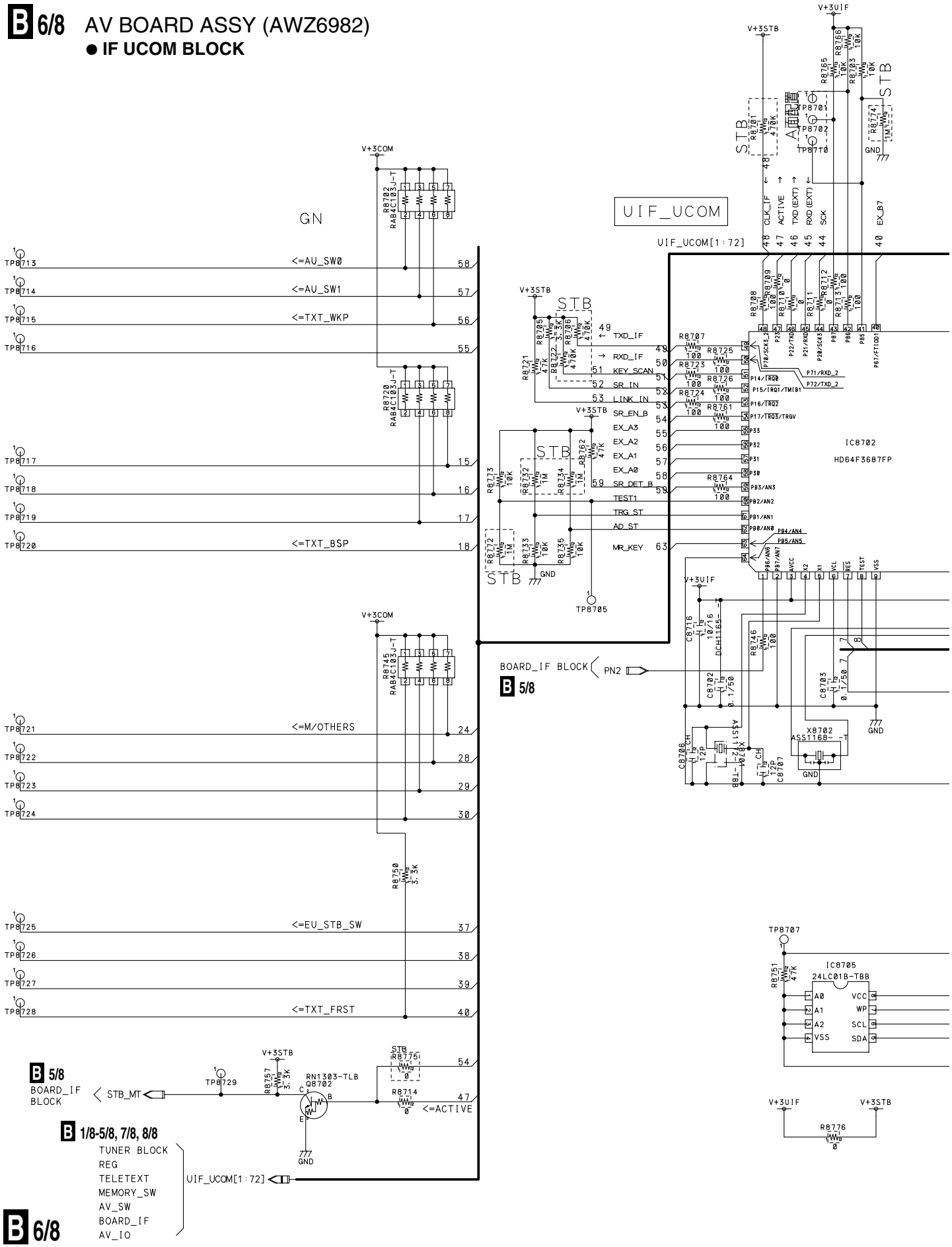


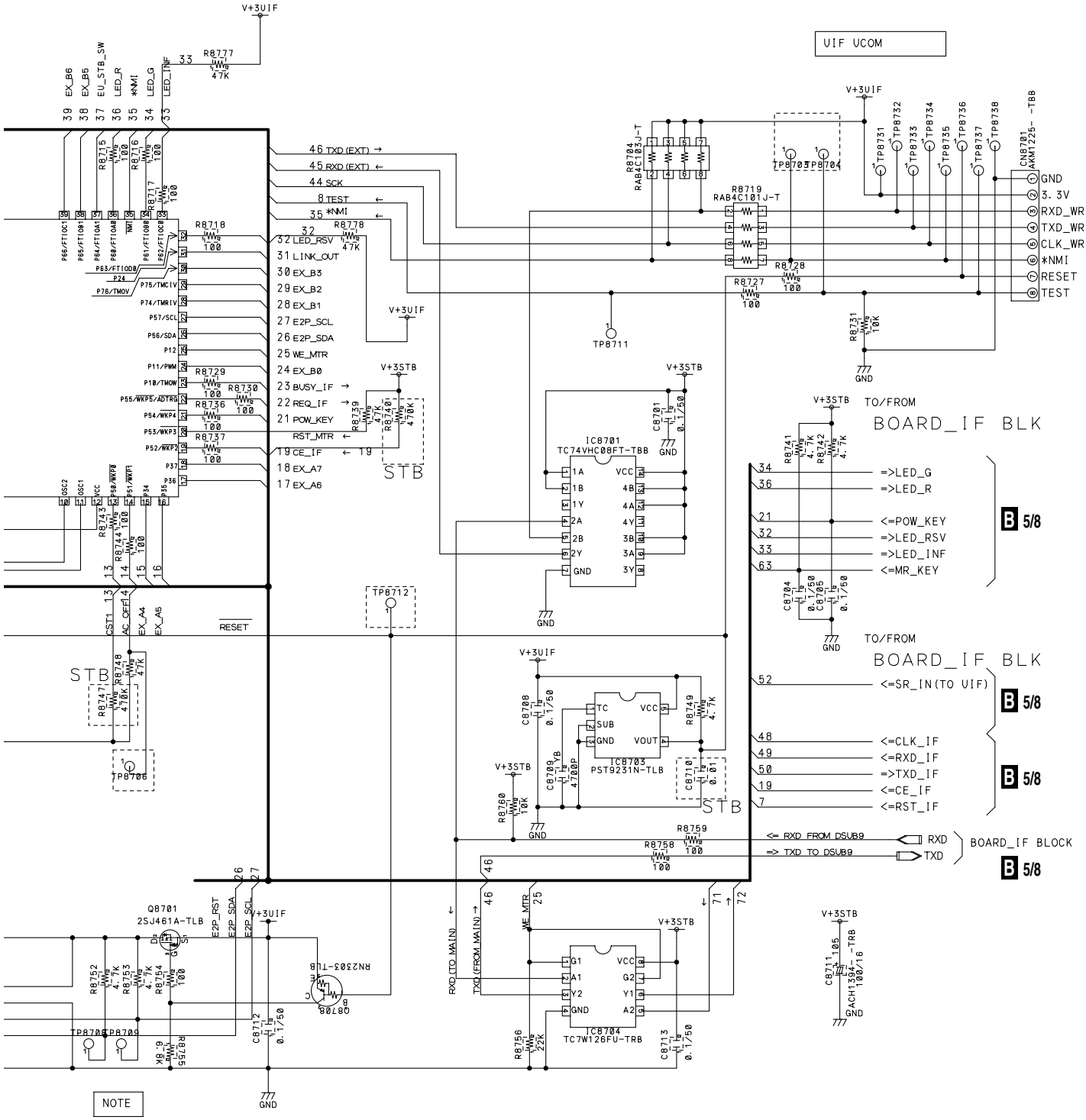

A1
TP8625 TP8624 TP8623 TP8622 TP8620 TP8619 TP8618 TP8617 TP8614 TP8613 TP8612 TP8611 TP8610 TP8609 TP8608 TP8607 TP8606 TP8605 TP8604 TP8603 TP8602 TP8601
TP8631 TP8628 TP8627 TP8626
WE_TXT
VD_TXT
TELETEXT BLOCK B 7/8
TP8633
TP8634
G_TXT_MAIN TELETEXT BLOCK B 7/8
CN8652 AKM1201- -TFB
A 13/13
CN7454
TP8635
GND
A2
TP8668 TP8667 TP8666 TP8665 TP8664 TP8663 TP8662 TP8661 TP8660 TP8659 TP8658 TP8657 TP8656 TP8655 TP8654 TP8653 TP8652 TP8651 TP8650 TP8649 TP8648 TP8647 TP8646 TP8645 TP8644 TP8643 TP8642 TP8641 TP8640 TP8639 TP8638 TP8636
TP8682
GND
CN8654 AKM1201- -TFB
A 13/13
CN7455
B 1/8
AIR_AFT TUNER BLOCK
B 1/8, 3/8, 4/8
SCL_AV TUNER BLOCK AV_SW REG
B 2/8,4/8
AV_IO BLOCK REG
RELAY
PSW1 REG BLOCK
CLAMP_MAIN TELETEXT BLOCK
MON_MUTE AV_IO BLOCK AV_SW
B 4/8
B 7/8
B 2/8, 3/8
R8651 1W 100
RST_IF 7
RXD_WR 72
TXD_IF 49
REQ_IF 22
CE_IF 19
KEYSCAN 51
CST1 13
TXD_WR 71
RXD_IF 50
CLK_IF 48
BUSY_IF 23
SR_OUT
B 7/8
TELETEXT BLOCK
RESET_TXT
B 4/8
REG BLOCK PD_MAIN
B 6/8
VIF_UCOM BLOCK STB_MT
TP8881 TP8880 TP8879 TP8878 TP8877 TP8876 TP8875 TP8874 TP8873 TP8872 TP8871 TP8870 TP8869
TP8586
TP8587 TP8585
C8653 1U 16 10/16 DCH1165- -T
C8654 1U 16 10/16 DCH1165- -T
C8655 1U 16 10/16 DCH1165- -T
B 3/8
AV_SW BLOCK
YUVD1_R
YUVD1_G
YUVD1_B
TP8589
TP8582
CARD_H
CARD_V
AV_IO BLOCK AV_SW B 2/8, 3/8
TP8584
R8657 1W 47K
R8656 1W 47K
R8655 1W 47K
GND
B 5/8

3.21 AV BOARD ASSY (6/8)

B 6/8 AV BOARD ASSY (AWZ6982)

● **IF UCOM BLOCK**



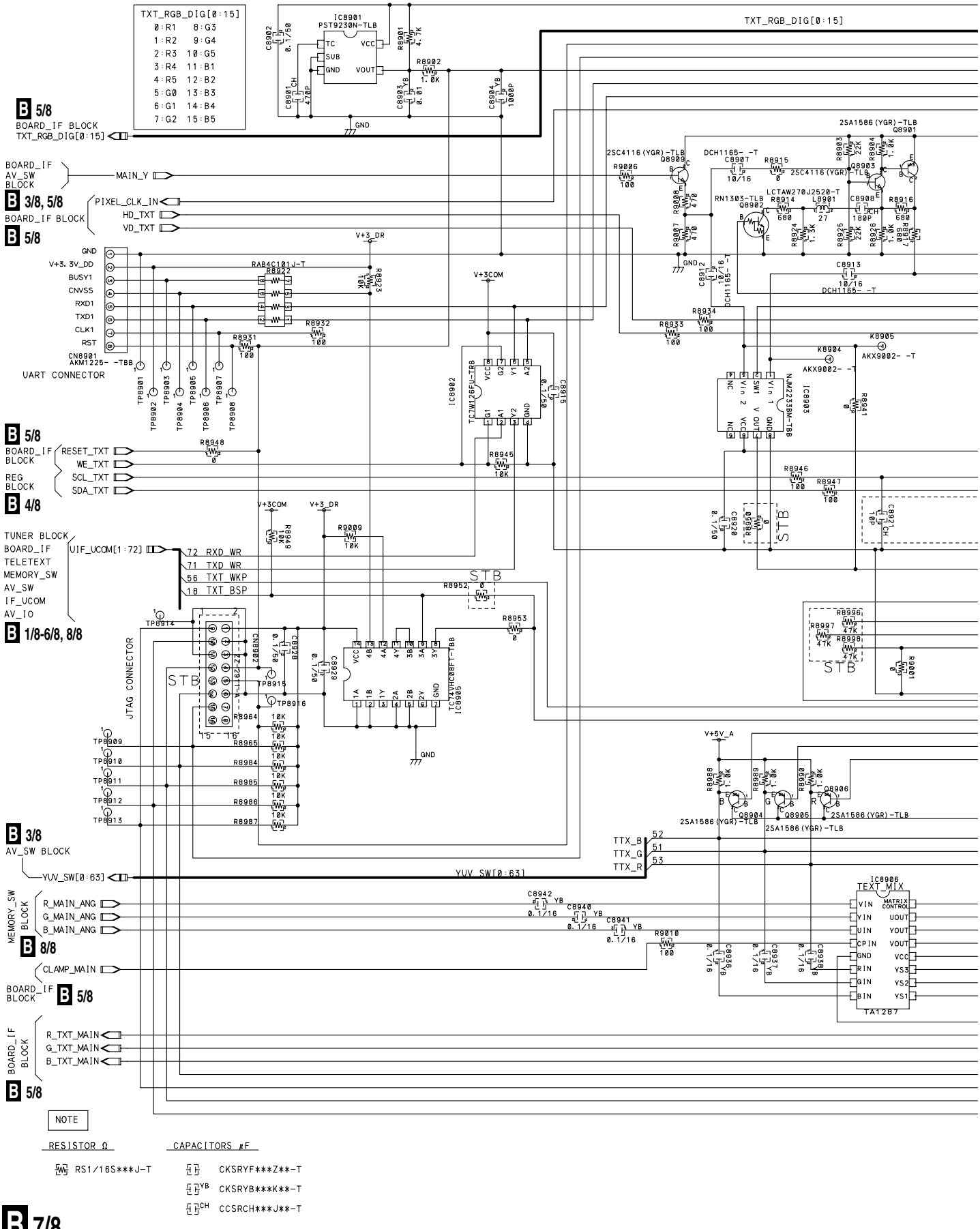


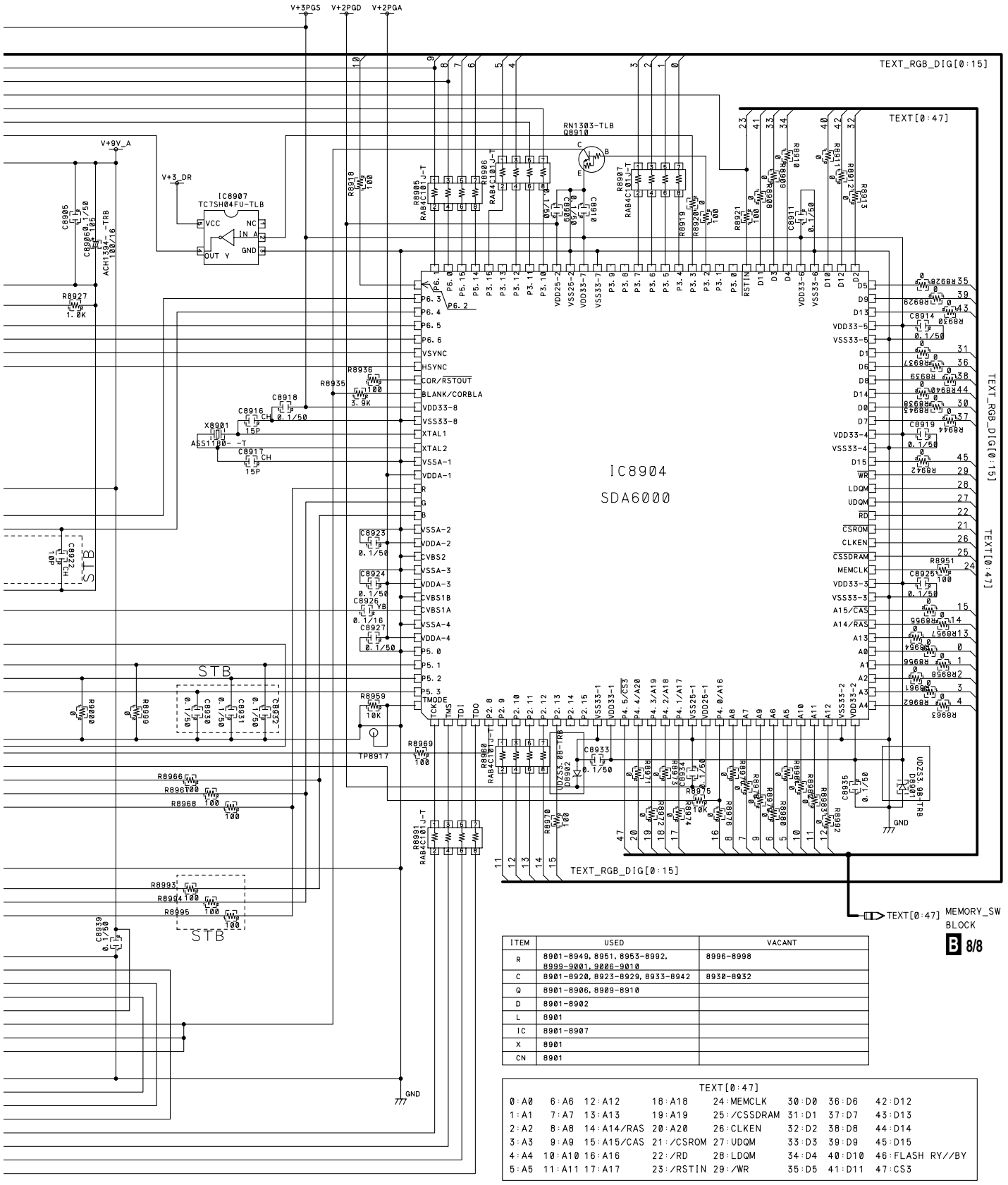
ITEM	USED	VACANT
R	8702-8705, 8707-8721, 8723-8731, 8733, 8736-8757, 8739, 8741-8746, 8748-8762 8764-8766, 8773, 8776-8778	
C	8701-8709, 8711-8713, 8716	
Q	8701-8702, 8708	
IC	8701-8705	
X	8701-8702	
CN	8701	

B 6/8

3.22 AV BOARD ASSY (7/8)

B 7/8 AV BOARD ASSY (AWZ6982) ● TELETEXT BLOCK





ITEM	USED	VACANT
R	8901-8949, 8951, 8953-8992, 8999-9001, 9006-9010	8996-8998
C	8901-8920, 8923-8929, 8933-8942	8930-8932
Q	8901-8906, 8909-8910	
D	8901-8902	
L	8901	
IC	8901-8907	
X	8901	
CN	8901	

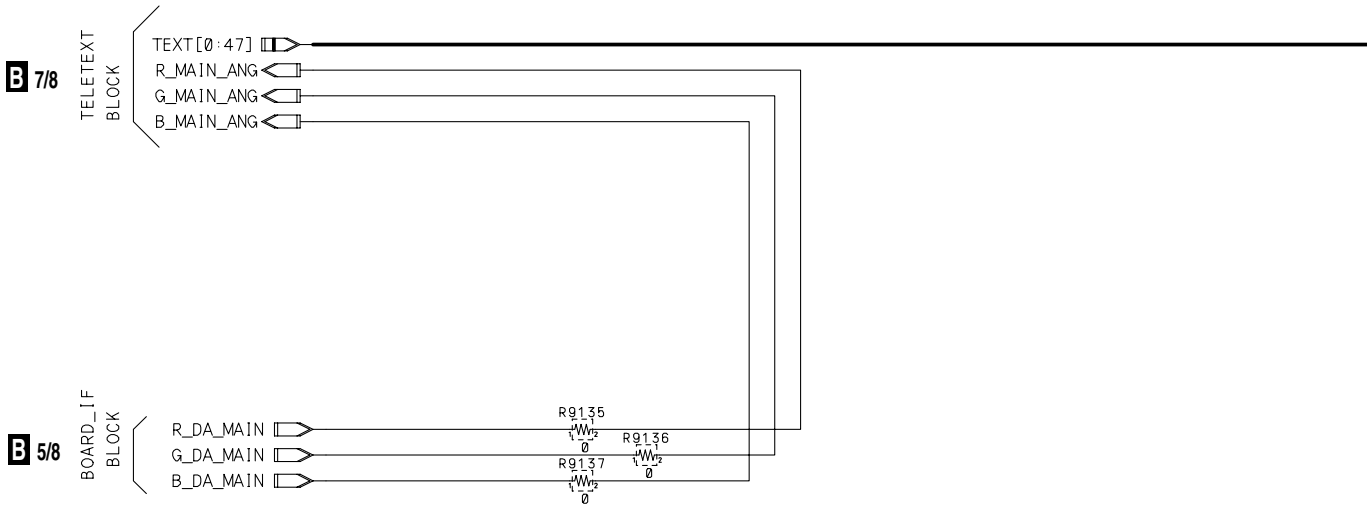
TEXT[0:47]

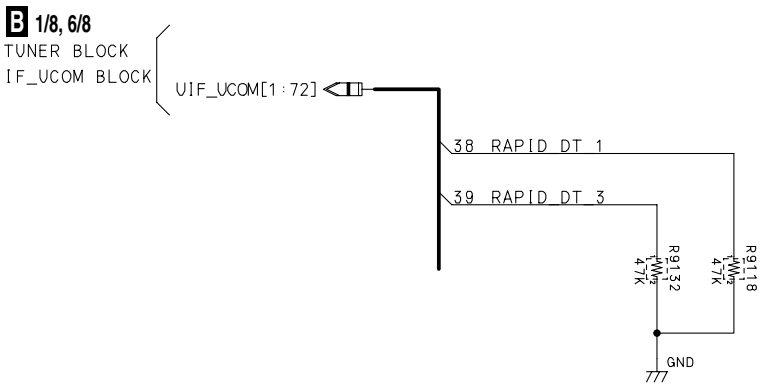
0:A0	6:A6	12:A12	18:A18	24:MEMCLK	30:D0	36:D6	42:D12	
1:A1	7:A7	13:A13	19:A19	25:/CSSDRAM	31:D1	37:D7	43:D13	
2:A2	8:A8	14:A14/RAS	20:A20	26:CLKEN	32:D2	38:D8	44:D14	
3:A3	9:A9	15:A15/CAS	21:/CSROM	27:UDQM	33:D3	39:D9	45:D15	
4:A4	10:A10	16:A16	22:/RD	28:LDQM	34:D4	40:D10	46:FLASH RY//BY	
5:A5	11:A11	17:A17	23:/RSTIN	29:/WR	35:D5	41:D11	47:CS3	

3.23 AV BOARD ASSY (8/8)

B 8/8 AV BOARD ASSY (AWZ6982)

● **MEMORY_SW BLOCK**





NOTE

RESISTOR Ω

RS1/16S***J-T

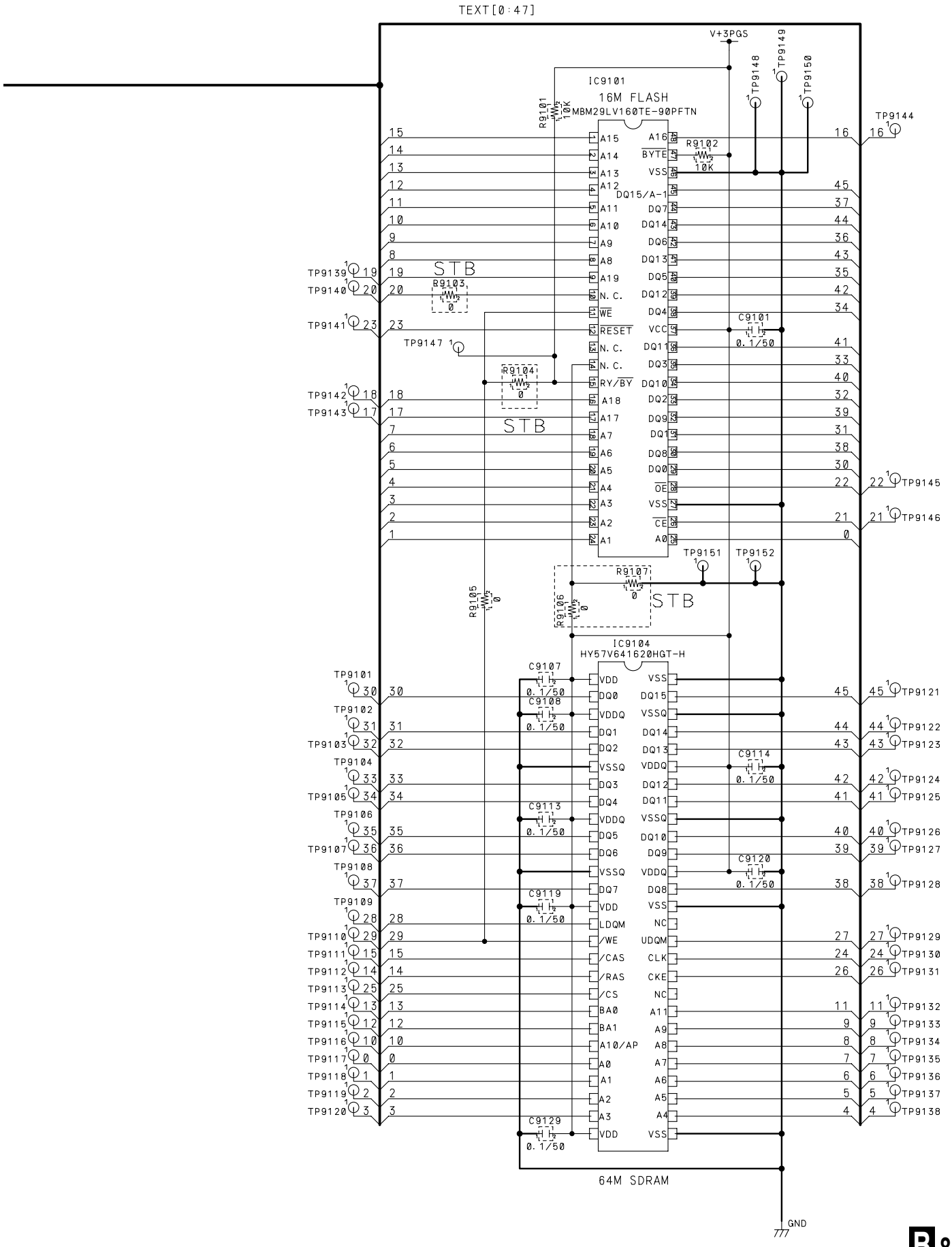
CAPACITORS μF

CKSRYF***Z**-T

TEXT[0:47]

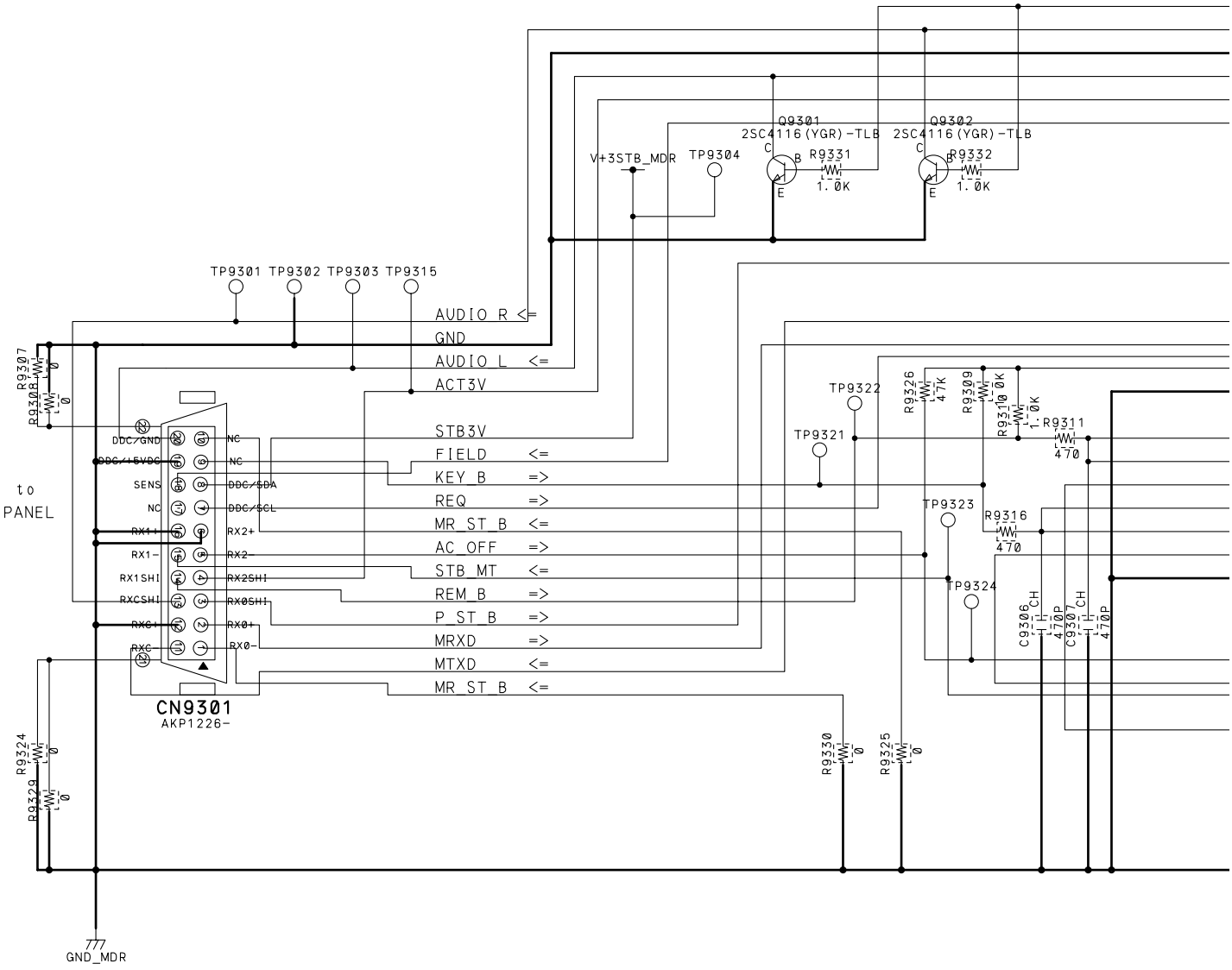
0:A0	10:A10	20:A20	30:D0	40:D10
1:A1	11:A11	21:/CSROM	31:D1	41:D11
2:A2	12:A12	22:/RD	32:D2	42:D12
3:A3	13:A13	23:/RSTIN	33:D3	43:D13
4:A4	14:A14/RAS	24:MEMCLK	34:D4	44:D14
5:A5	15:A15/CAS	25:/CSSDRAM	35:D5	45:D15
6:A6	16:A16	26:CLKEN	36:D6	46:FLASH RY//BY
7:A7	17:A17	27:UDQM	37:D7	47:CS3
8:A8	18:A18	28:LDQM	38:D8	
9:A9	19:A19	29:/WR	39:D9	

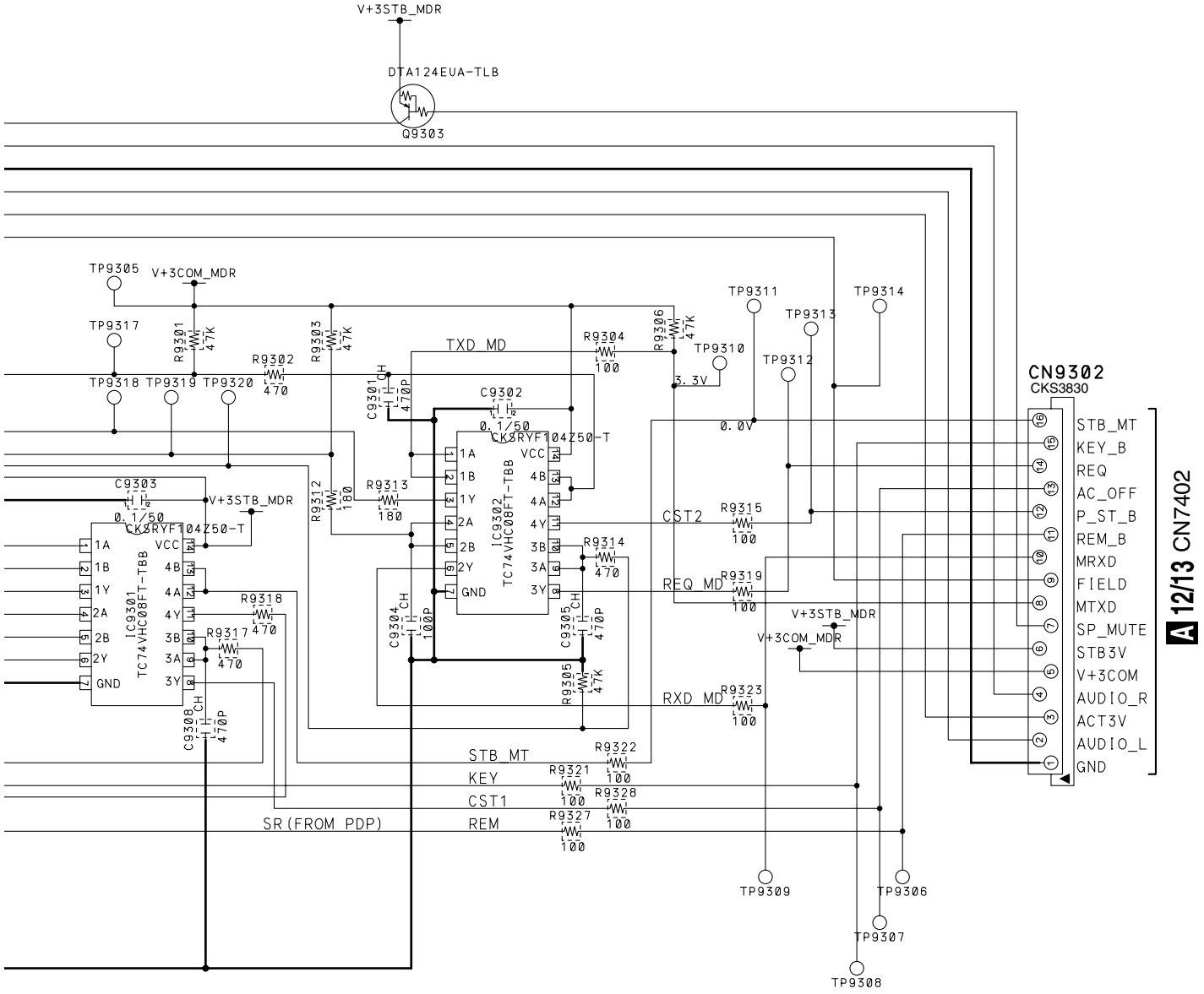
B 8/8


TEXT[0:47]
V+3PGS
IC9101
16M FLASH
MBM29LV160TE-90PFTN
R9101 10K
R9102 10K
TP9148
TP9149
TP9150
TP9144
STB
R9103 0
R9104 0
R9107 0
R9105 0
R9106 0
C9101 0.1/50
TP9147
TP9151
TP9152
TP9139
TP9140
TP9141
TP9142
TP9143
TP9145
TP9146
A15
A14
A13
A12
A11
A10
A9
A8
A19
N. C.
WE
RESET
N. C.
N. C.
RY/BY
A18
A17
A7
A6
A5
A4
A3
A2
A1
A16
BYTE
VSS
DQ15/A-1
DQ7
DQ14
DQ6
DQ13
DQ5
DQ12
DQ4
VCC
DQ11
DQ3
DQ10
DQ2
DQ9
DQ1
DQ8
DQ0
OE
VSS
CE
A0
IC9104
HY57V641620HGT-H
C9107 0.1/50
C9108 0.1/50
C9113 0.1/50
C9119 0.1/50
C9129 0.1/50
C9114 0.1/50
C9120 0.1/50
TP9101
TP9102
TP9103
TP9104
TP9105
TP9106
TP9107
TP9108
TP9109
TP9110
TP9111
TP9112
TP9113
TP9114
TP9115
TP9116
TP9117
TP9118
TP9119
TP9120
TP9121
TP9122
TP9123
TP9124
TP9125
TP9126
TP9127
TP9128
TP9129
TP9130
TP9131
TP9132
TP9133
TP9134
TP9135
TP9136
TP9137
TP9138
VDD
DQ0
VDDQ
DQ1
DQ2
VSSQ
DQ3
DQ4
VDDQ
DQ5
DQ6
VSSQ
DQ7
VDD
LDQM
/WE
/CAS
/RAS
/CS
BA0
BA1
A10/AP
A0
A1
A2
A3
VDD
VSS
DQ15
VSSQ
DQ14
DQ13
VDDQ
DQ12
DQ11
VSSQ
DQ10
DQ9
VDDQ
DQ8
VSS
NC
UDQM
CLK
CKE
NC
A11
A9
A8
A7
A6
A5
A4
VSS
64M SDRAM
GND

3.24 MDR ASSY

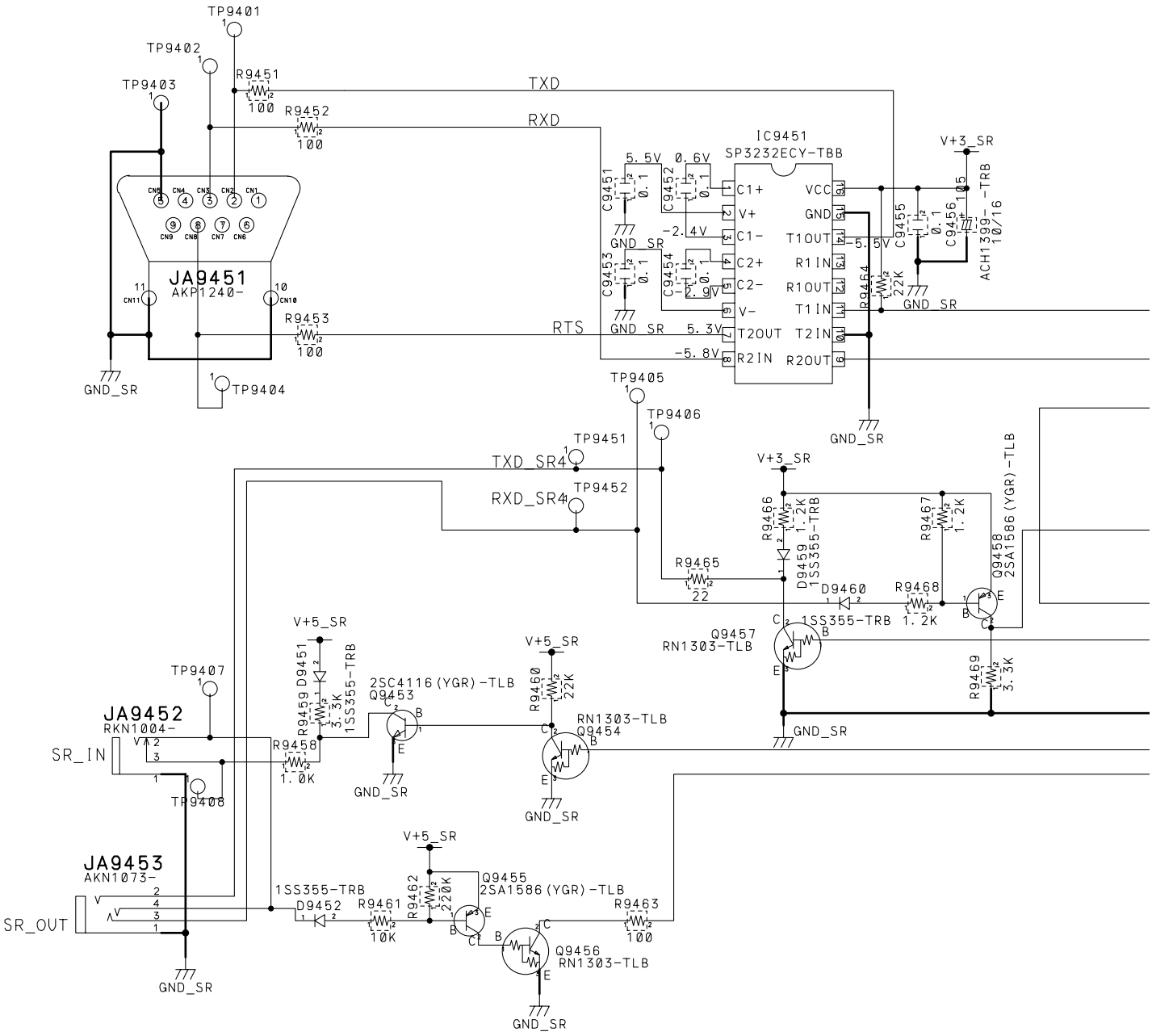
C MDR ASSY (AWZ6778)

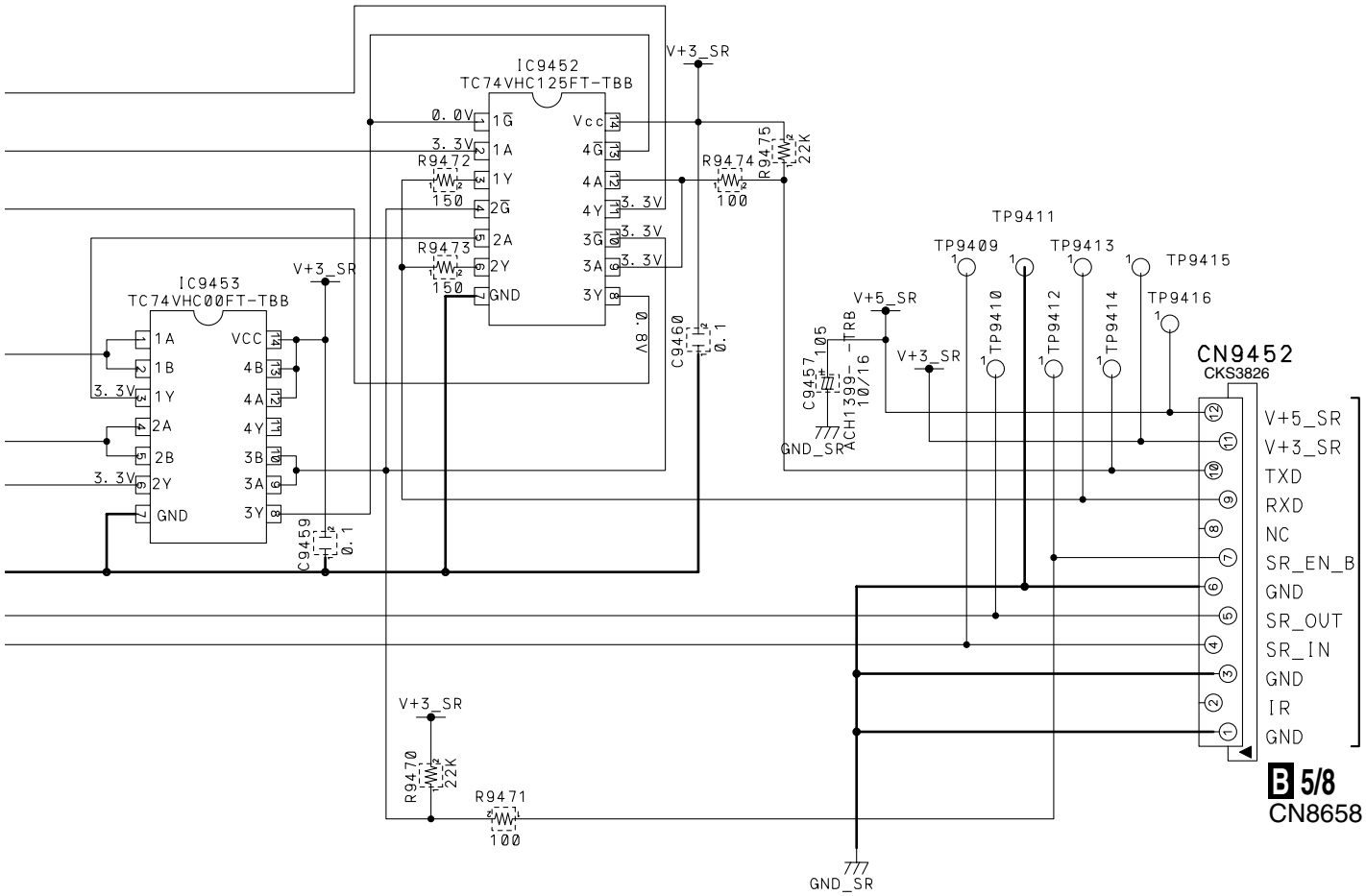



V+3STB_MDR
DTA124EUA-TLB
Q9303
TP9305
V+3COM_MDR
TP9317
TP9318
TP9319
TP9320
R9301 47K
R9302 470
R9303 47K
C9301 CH 470P
TXD MD
R9304 100
R9306 47K
TP9310
3.3V
TP9311
TP9313
TP9314
TP9312
0.0V
C9302 0.1/50 CK3RYF104Z50-T
IC9302 TC74VHC08FT-TBB
C9303 0.1/50 CK3RYF104Z50-T
IC9301 TC74VHC08FT-TBB
R9312 180
R9313 180
CST2
R9315 100
R9314 470
REQ MD
R9319 100
R9318 470
R9317 470
C9304 CH 100P
C9305 CH 470P
R9305 47K
RXD MD
R9323 100
C9308 CH 470P
STB MT
KEY
CST1
REM
SR(FROM PDP)
R9322 100
R9321 100
R9328 100
R9327 100
TP9309
TP9306
TP9307
TP9308
CN9302
CKS3830
STB_MT
KEY_B
REQ
AC_OFF
P_ST_B
REM_B
MRXD
FIELD
MTXD
SP_MUTE
STB3V
V+3COM
AUDIO_R
ACT3V
AUDIO_L
GND
A 12/13 CN7402

3.25 SR ASSY

D SR ASSY (AWZ6817)



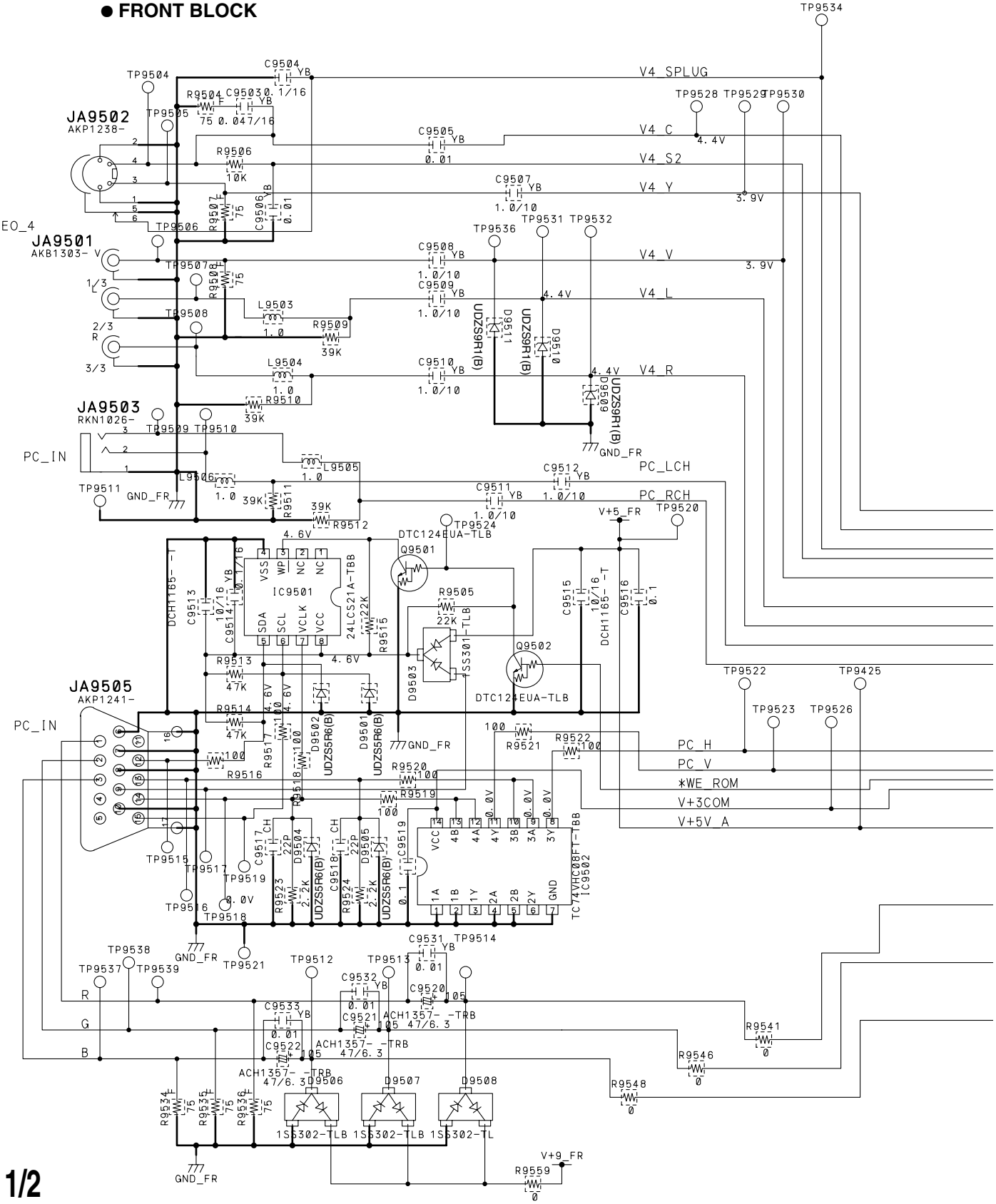

IC9452
TC74VHC125FT-TBB
IC9453
TC74VHC00FT-TBB
V+3_SR
V+5_SR
GND_SR
R9472
150
R9473
150
R9474
100
R9475
22K
R9470
22K
R9471
100
C9459
0.1
C9460
0.1
C9457
105
ACH1399-__-TRB
10/16
0.0V
3.3V
0.8V
TP9409
TP9410
TP9411
TP9412
TP9413
TP9414
TP9415
TP9416
CN9452
CKS3826
V+5_SR
V+3_SR
TXD
RXD
NC
SR_EN_B
GND
SR_OUT
SR_IN
GND
IR
GND
B 5/8
CN8658

5 6 7 8

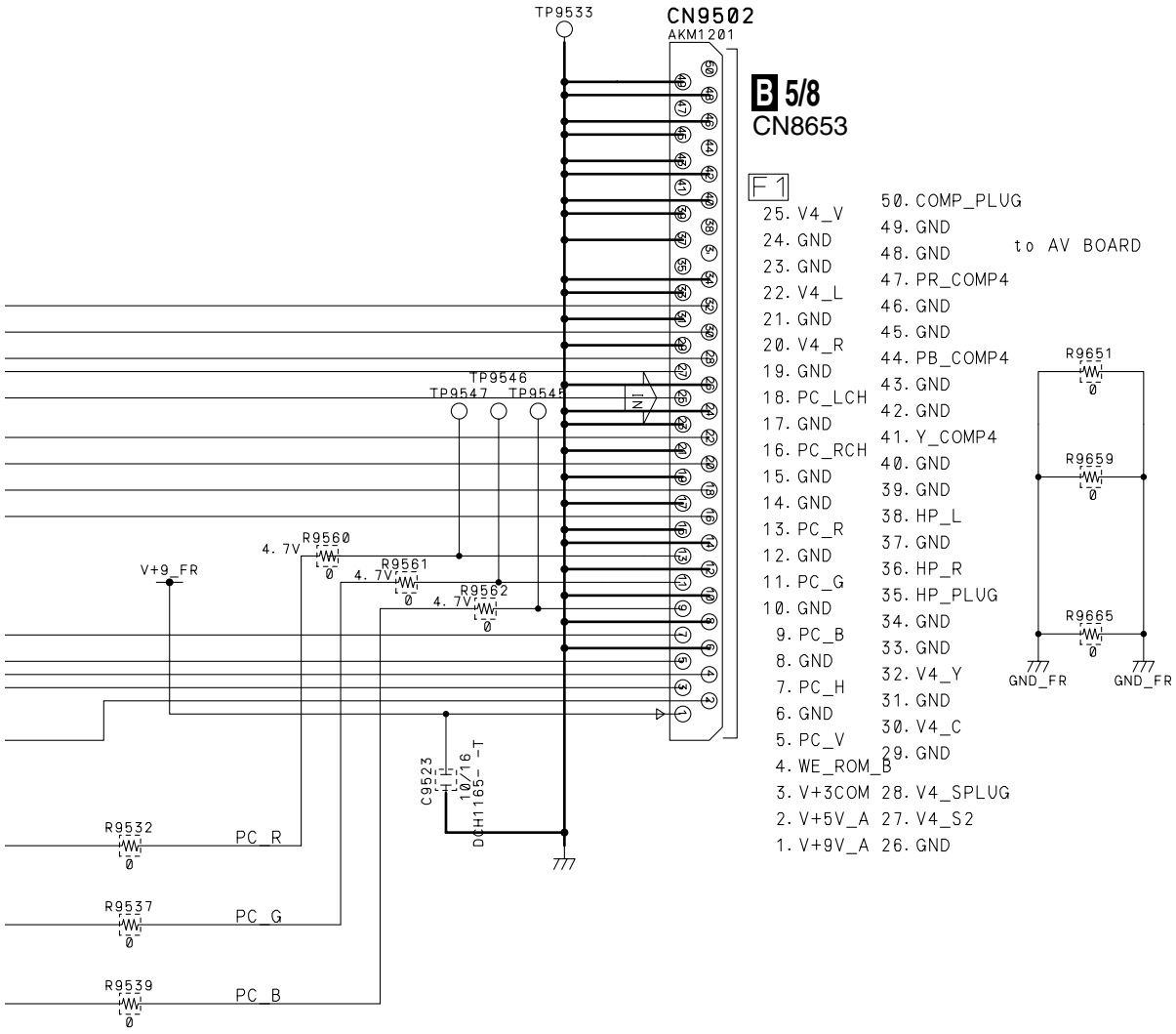
3.26 FRONT ASSY (1/2)

E 1/2 FRONT ASSY (AWZ6975)

● **FRONT BLOCK**



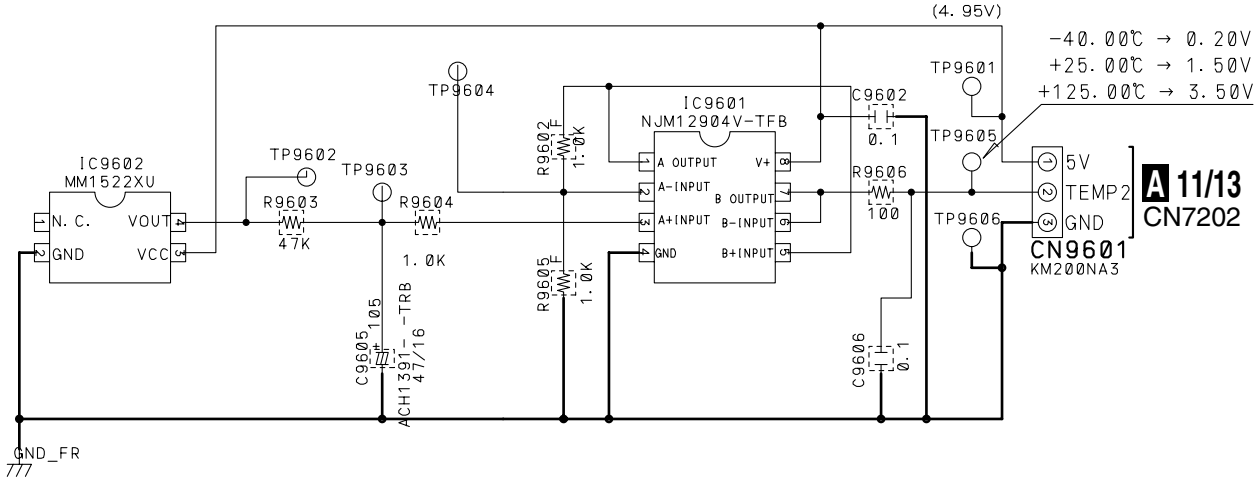
E 1/2


TP9533
CN9502
AKM1201
B 5/8
CN8653
F1
25. V4_V
24. GND
23. GND
22. V4_L
21. GND
20. V4_R
19. GND
18. PC_LCH
17. GND
16. PC_RCH
15. GND
14. GND
13. PC_R
12. GND
11. PC_G
10. GND
9. PC_B
8. GND
7. PC_H
6. GND
5. PC_V
4. WE_ROM_B
3. V+3COM
2. V+5V_A
1. V+9V_A
50. COMP_PLUG
49. GND
48. GND
47. PR_COMP4
46. GND
45. GND
44. PB_COMP4
43. GND
42. GND
41. Y_COMP4
40. GND
39. GND
38. HP_L
37. GND
36. HP_R
35. HP_PLUG
34. GND
33. GND
32. V4_Y
31. GND
30. V4_C
29. GND
28. V4_SPLUG
27. V4_S2
26. GND
to AV BOARD
TP9546
TP9547
TP9545
N1
R9560
4.7V
R9561
4.7V
R9562
4.7V
V+9_FR
C9523
1H
10/16
DCH1165-T
R9532
PC_R
R9537
PC_G
R9539
PC_B
R9651
R9659
R9665
GND_FR
GND_FR

3.27 FRONT ASSY (2/2)

E 2/2 FRONT ASSY (AWZ6975)

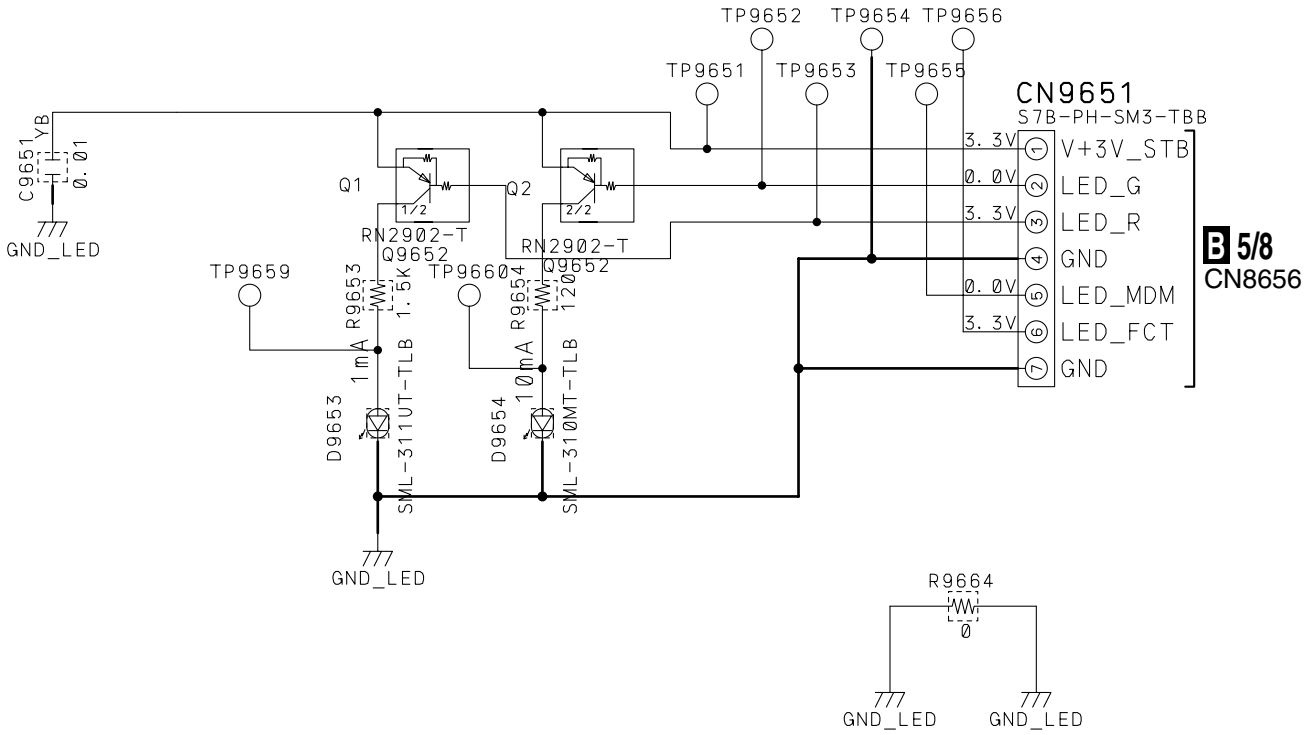
● **SENSOR BLOCK**



E 2/2

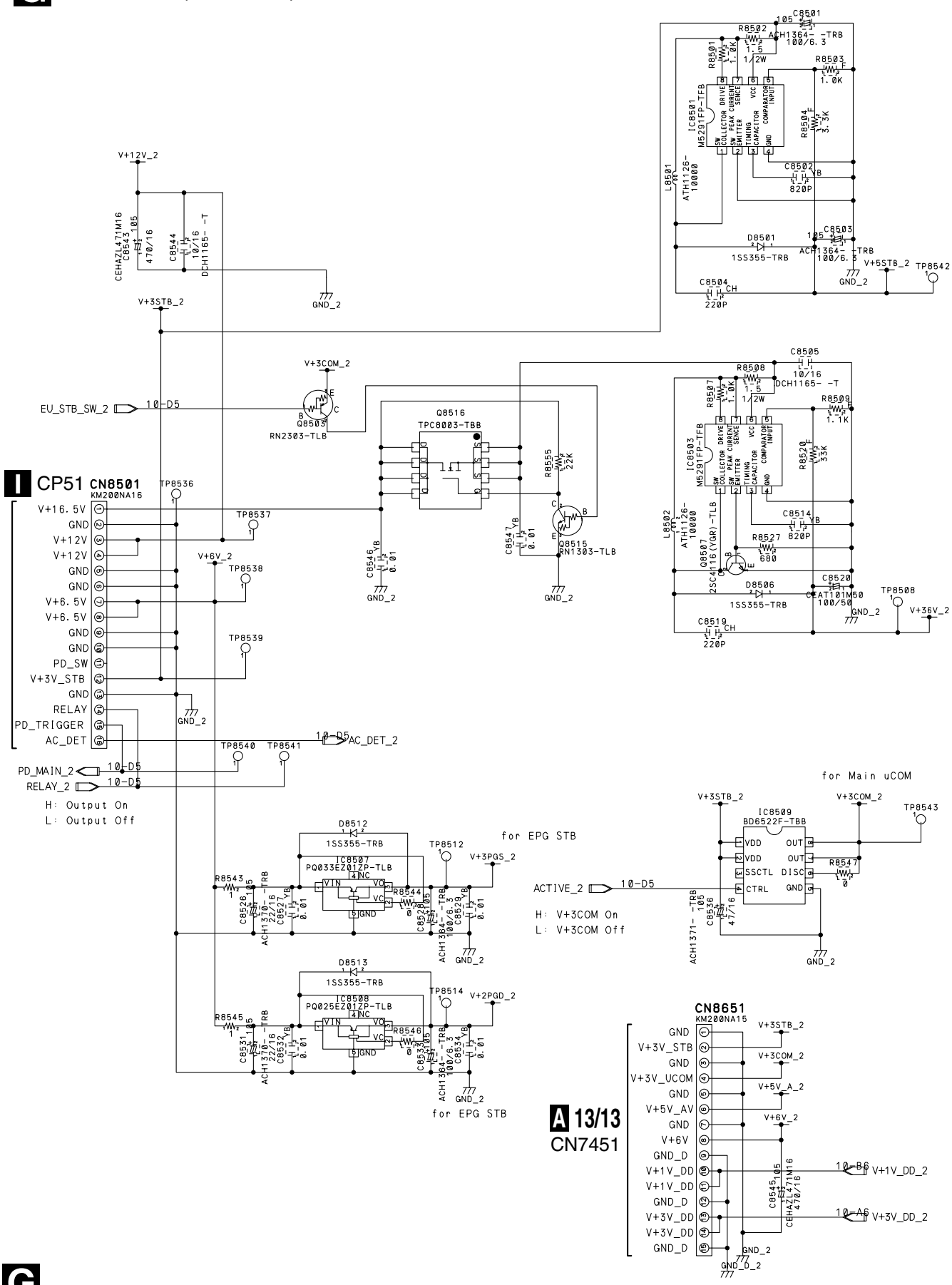
3.28 LED ASSY

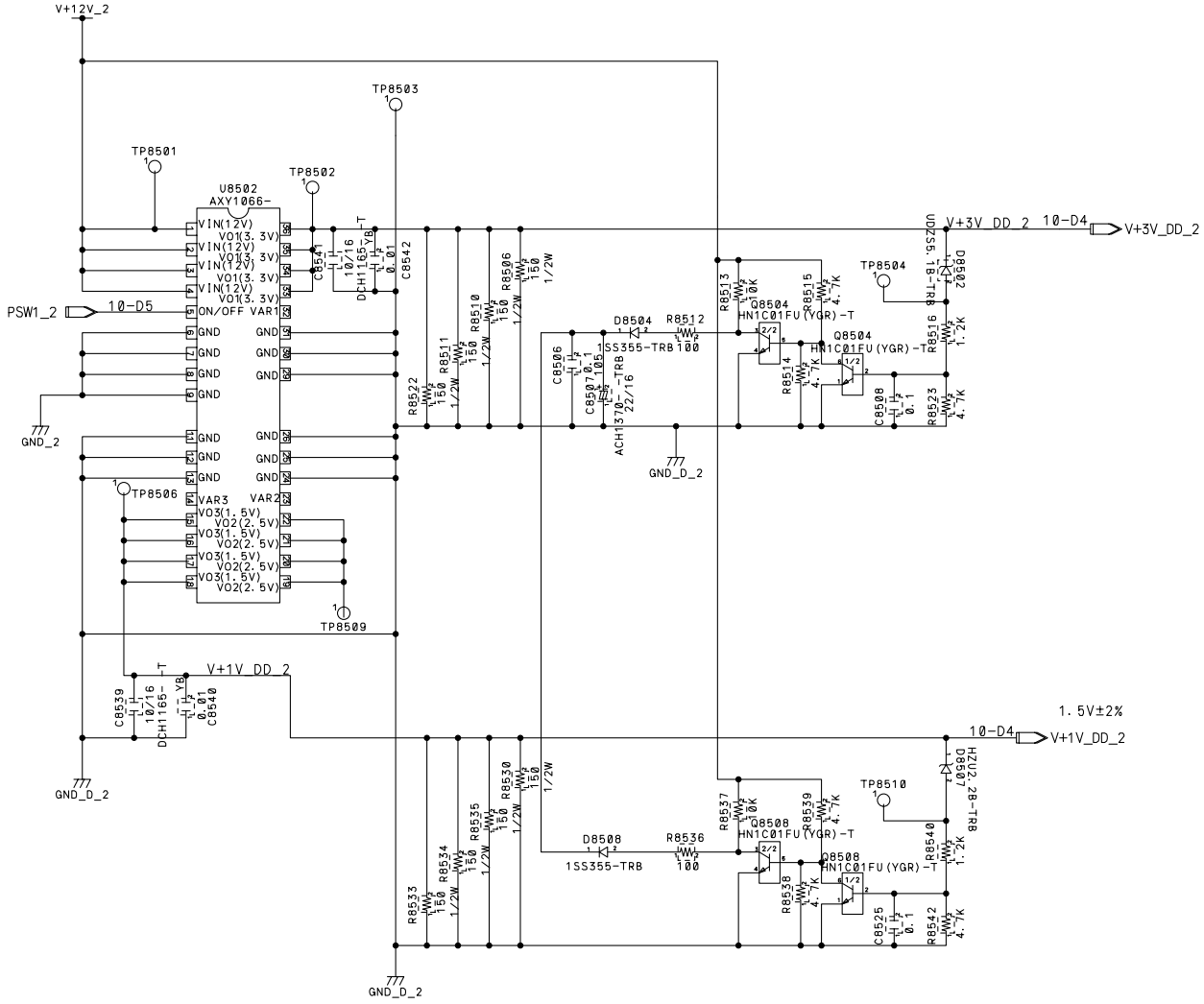
F LED ASSY (AWZ6816)

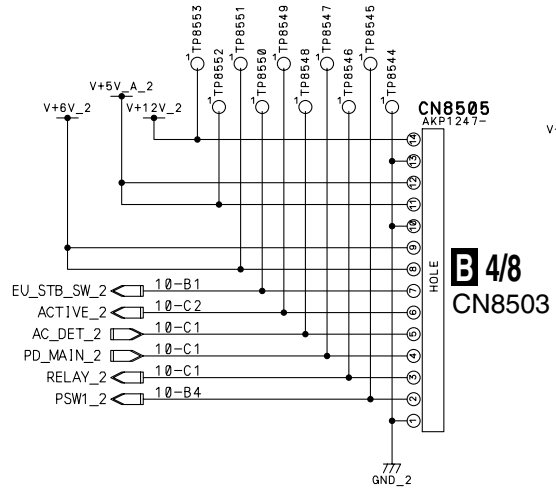


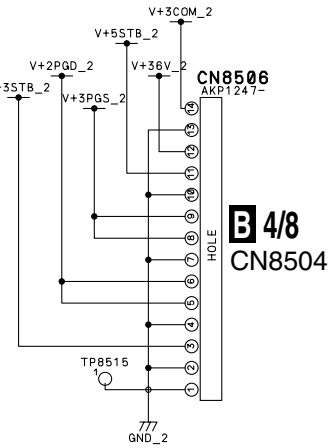
3.29 REG ASSY

G REG ASSY (AWZ6833)

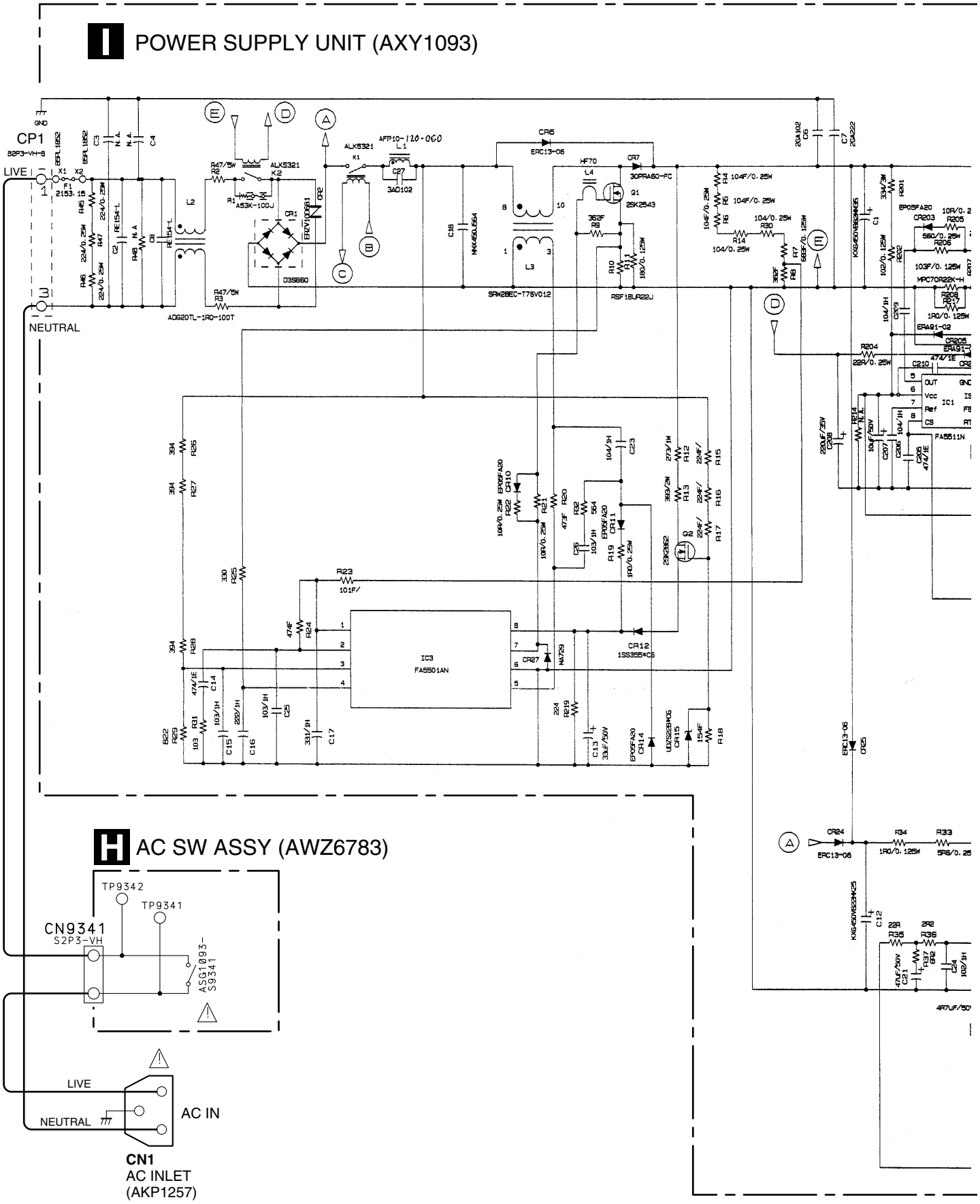


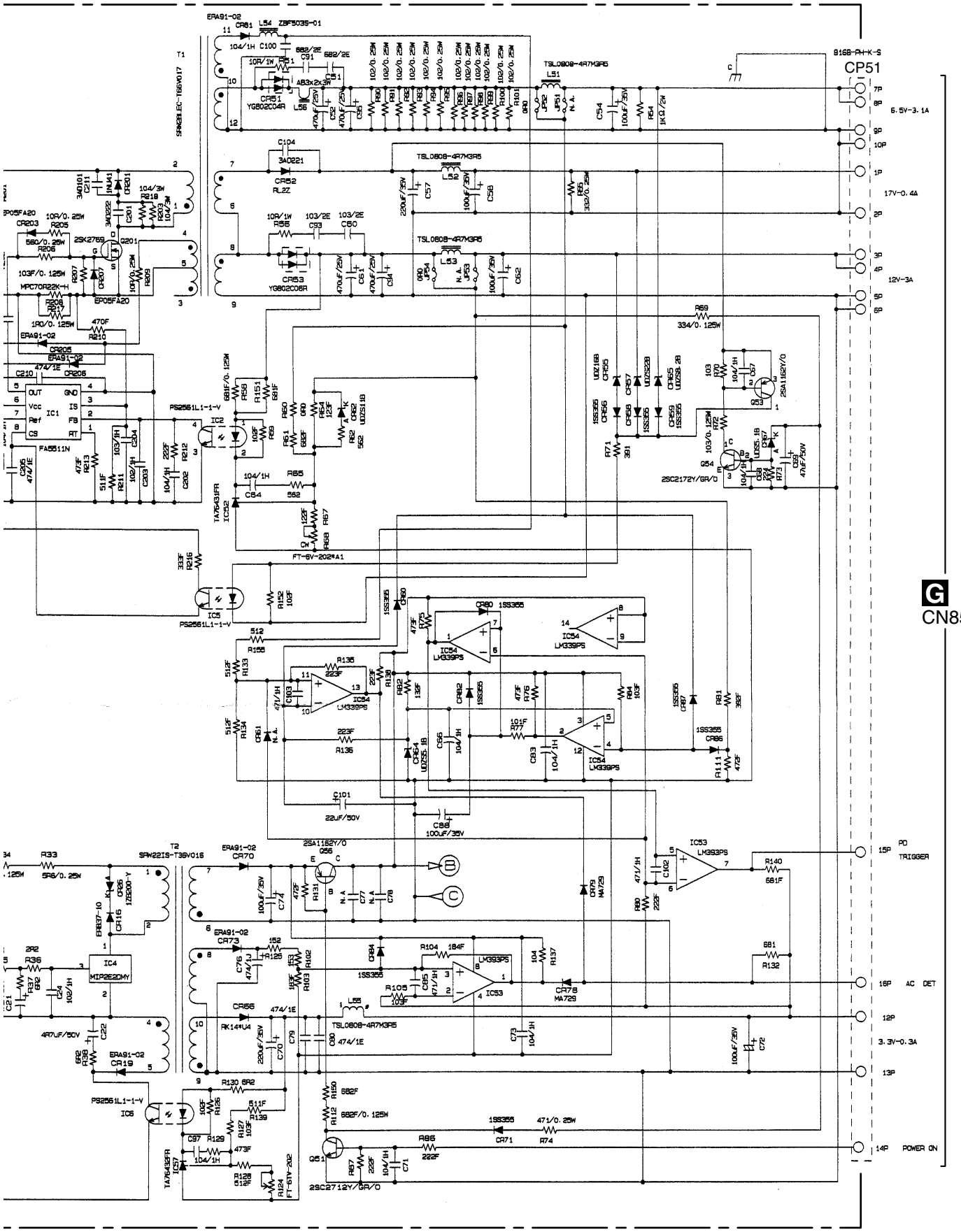

V+12V_2
TP8503
TP8501
TP8502
U8502
AXY1066-
VIN(12V)
VO1(3.3V)
ON/OFF
VAR1
GND
VAR3
VAR2
VO3(1.5V)
VO2(2.5V)
TP8509
TP8506
PSW1_2
10-D5
GND_2
V+3V_DD_2
10-D4
V+3V_DD_2
TP8504
D8502
D8504
1SS355-TRB
R8512
100
Q8504
HN1C01FU(YGR)-T
R8513
10K
R8515
4.7K
R8514
4.7K
R8516
1.2K
R8523
4.7K
C8506
C8507
C8508
0.1
R8506
R8510
R8511
R8522
C8542
GND_D_2
V+1V_DD_2
1.5V±2%
10-D4
V+1V_DD_2
C8539
C8540
0.01
TP8510
D8507
D8508
1SS355-TRB
R8536
100
Q8508
HN1C01FU(YGR)-T
R8537
10K
R8539
4.7K
R8538
4.7K
R8540
1.2K
R8542
4.7K
C8525
0.1
R8530
R8535
R8534
R8533
GND_D_2


TP8553
TP8552
TP8551
TP8550
TP8549
TP8548
TP8547
TP8546
TP8545
TP8544
V+5V_A_2
V+6V_2
V+12V_2
CN8505
AKP1247-
HOLE
B 4/8
CN8503
EU_STB_SW_2
10-B1
ACTIVE_2
10-C2
AC_DET_2
10-C1
PD_MAIN_2
10-C1
RELAY_2
10-C1
PSW1_2
10-B4
GND_2


V+3COM_2
V+5STB_2
V+2PGD_2
V+36V_2
V+3STB_2
V+3PGS_2
CN8506
AKP1247-
HOLE
B 4/8
CN8504
TP8515
GND_2

3.30 POWER SUPPLY UNIT




CP51
CN8501
G
I
6.5V-3.1A
17V-0.4A
12V-3A
3.3V-0.3A
PD TRIGGER
AC DET
POWER ON
IC1
FA5511N
IC2
PS2561L1-1-V
IC4
MIP2E2DMY
IC53
LM393PS
IC54
LM339PS
IC5
IC6
IC57
TA76431FA
Q51
2SC2712Y/GR/O
Q53
2SA1162Y/O
Q54
2SC2172Y/GR/O
Q56
2SA1152Y/O
T1
T2
SPW221S-T36V016
CR51
YG802C04R
CR52
RL2Z
CR53
YG802C08R
CR70
CR73
CR19
CR205
CR206
CR66
CR71
CR78
MA729
CR79
MA729
CR80 1SS355
CR81
ZBF5035-01
CR82 1SS355
CR84 1SS355
CR86 1SS355
CR87 1SS355
CR88 1SS355
CR89 1SS355
CR90 1SS355
CR61 N.A.
CR64 UDZ5.1B
CR65 UDZ8.2B
CR67 UDZ5.1B
CR68 UDZ5.1B
CR55 UDZ16B
CR57 UDZ22B
CR59 1SS355
CR69 1SS355
CR66 1SS355
CR95 1SS355
CR96 1SS355
CR97 1SS355
CR98 1SS355
CR99 1SS355
CR100 1SS355
CR101 1SS355
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CR103 1SS355
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CR120 1SS355
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CR124 1SS355
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CR209 1SS355
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CR211 1SS355
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CR213 1SS355
CR214 1SS355
CR215 1SS355
CR216 1SS355
CR217 1SS355
CR218 1SS355
CR219 1SS355
CR220 1SS355
CR221 1SS355
CR222 1SS355
CR223 1SS355
CR224 1SS355
CR225 1SS355
CR226 1SS355
CR227 1SS355
CR228 1SS355
CR229 1SS355
CR230 1SS355
CR231 1SS355
CR232 1SS355
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CR236 1SS355
CR237 1SS355
CR238 1SS355
CR239 1SS355
CR240 1SS355
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CR243 1SS355
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CR247 1SS355
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CR251 1SS355
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CR255 1SS355
CR256 1SS355
CR257 1SS355
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CR259 1SS355
CR260 1SS355
CR261 1SS355
CR262 1SS355
CR263 1SS355
CR264 1SS355
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CR266 1SS355
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CR281 1SS355
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CR289 1SS355
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CR306 1SS355
CR307 1SS355
CR308 1SS355
CR309 1SS355
CR310 1SS355
CR311 1SS355
CR312 1SS355
CR313 1SS355
CR314 1SS355
CR315 1SS355
CR316 1SS355
CR317 1SS355
CR318 1SS355
CR319 1SS355
CR320 1SS355
CR321 1SS355
CR322 1SS355
CR323 1SS355
CR324 1SS355
CR325 1SS355
CR326 1SS355
CR327 1SS355
CR328 1SS355
CR329 1SS355
CR330 1SS355
CR331 1SS355
CR332 1SS355
CR333 1SS355
CR334 1SS355
CR335 1SS355
CR336 1SS355
CR337 1SS355
CR338 1SS355
CR339 1SS355
CR340 1SS355
CR341 1SS355
CR342 1SS355
CR343 1SS355
CR344 1SS355
CR345 1SS355
CR346 1SS355
CR347 1SS355
CR348 1SS355
CR349 1SS355
CR350 1SS355
CR351 1SS355
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CR361 1SS355
CR362 1SS355
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CR366 1SS355
CR367 1SS355
CR368 1SS355
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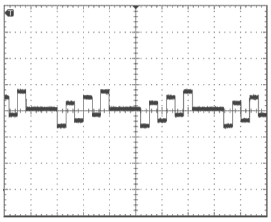
CR1000 1SS355

3.31 WAVEFORMAS and VOLTAGES

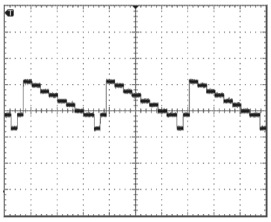
Note : The encircled numbers denote measuring point in the schematic diagram.

A MR MAIN BOARDASSY

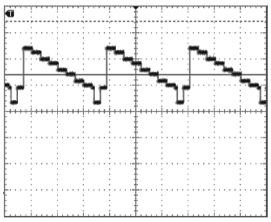
1 TP6402 (Component B)
V: 500mV/div. H: 20µsec/div.



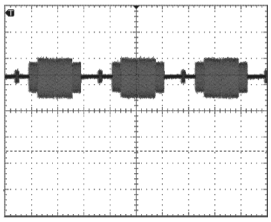
7 TP6605 (Component G)
V: 500mV/div. H: 20µsec/div.



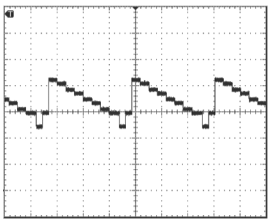
13 TP7456 (SUB_Y)
V: 1V/div. H: 20µsec/div.



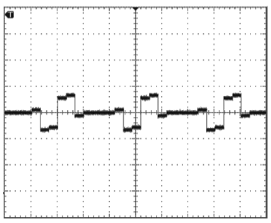
14 TP7457 (SUB_C)
V: 1V/div. H: 20µsec/div.



2 TP6403 (Component G)
V: 500mV/div. H: 20µsec/div.

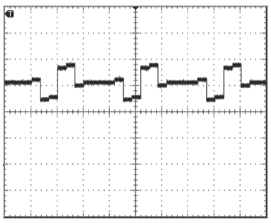


8 TP6606 (Component R)
V: 500mV/div. H: 20µsec/div.

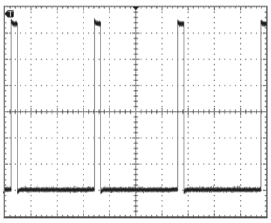


B AV BOARD ASSY

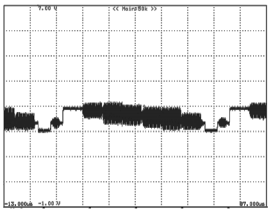
3 TP6404 (Component R)
V: 500mV/div. H: 20µsec/div.



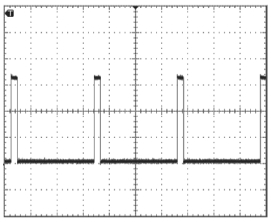
9 TP6607 (HD2_SUB)
V: 500mV/div. H: 20µsec/div.



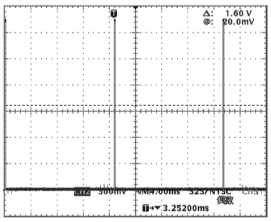
1 TP7502 (AIR_V)
V: 1V/div. H: 10µsec/div.



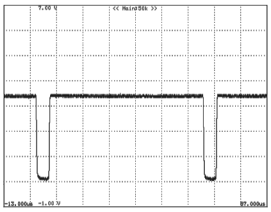
4 TP6405 (HD2_MAIN)
V: 1V/div. H: 20µsec/div.



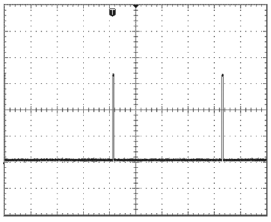
10 TP6608 (VD2_SUB)
V: 500mV/div. H: 4msec/div.



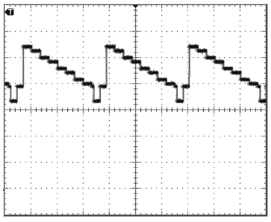
2 R7253 - R7534 (AIR_HS)
V: 1V/div. H: 10µsec/div.



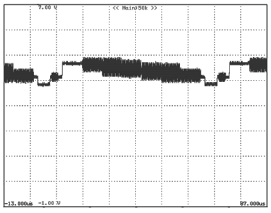
5 TP6406 (VD2_MAIN)
V: 1V/div. H: 400msec/div.



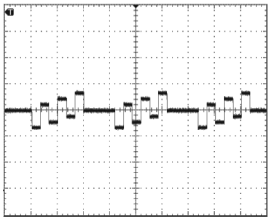
11 TP7451 (MAIN_Y)
V: 1V/div. H: 20µsec/div.



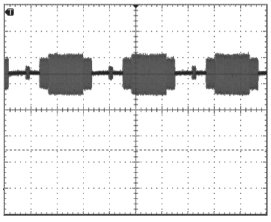
3 IC8002-pin 63 (AIR_V)
V: 1V/div. H: 10µsec/div.



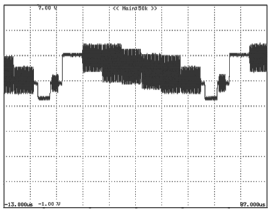
6 TP6604 (Component B)
V: 500mV/div. H: 20µsec/div.



12 TP7452 (MAIN_C)
V: 1V/div. H: 20µsec/div.



4 IC8002-pin 44 (MAIN_Y)
V: 1V/div. H: 10µsec/div.



A MR MAIN BOARD ASSY **C** MDR ASSY

CN7402 (AKM1234)		Voltage (V)	CN9302 (CKS3830)	
No.	Name		Name	No.
16	GND	0.00	GND	1
15	SP_L	0.00	SP_L	2
14	V+3ACT	3.32	V+3ACT	3
13	SP_R	0.00	SP_R	4
12	V+3COM	3.34	V+3COM	5
11	V+3STB	3.36	V+3STB	6
10	SP_MUTE	3.36	SP_MUTE	7
9	MTXD	3.33	MTXD	8
8	FIELD	0.01	FIELD	9
7	MRXD	3.34	MRXD	10
6	REM	3.34	REM	11
5	CST2	0.00	CST2	12
4	CST1	0.00	CST1	13
3	REQ	0.00	REQ	14
2	KEY	3.36	KEY	15
1	STB_MT	0.39	STB_MT	16

A MR MAIN BOARD ASSY TRAP SW

CN7203 (AKM1213)		Voltage (V)		
No.	Name		Name	No.
1	TRAP_SW	3.34		
2	NC			
3	V+3V_UCOM	3.34		

B AV BOARD ASSY **E** FRONT ASSY

CN8653 (AKM1201)		Voltage (V)	CN9502 (AKM1201)	
No.	Name		Name	No.
50	V+9V_A	8.96	V+9V_A	1
49	V+5V_A	5.00	V+5V_A	2
48	V+3COM	3.35	V+3COM	3
47	WE_ROM_B	0.01	WE_ROM_B	4
46	PC_V	0.00	PC_V	5
45	GND	0.00	GND	6
44	PC_H	0.00	PC_H	7
43	GND	0.00	GND	8
42	PC_B	1.76	PC_B	9
41	GND	0.00	GND	10
40	PC_G	1.77	PC_G	11
39	GND	0.00	GND	12
38	PC_R	1.77	PC_R	13
37	GND	0.00	GND	14
36	GND	0.00	GND	15
35	PC_RCH	4.45	PC_RCH	16
34	GND	0.00	GND	17
33	PC_LCH	4.45	PC_LCH	18
32	GND	0.00	GND	19
31	V4_R	4.44	V4_R	20
30	GND	0.00	GND	21
29	V4_L	4.44	V4_L	22
28	GND	0.00	GND	23
27	GND	0.00	GND	24
26	V4_V	4.36	V4_V	25
25	GND	0.00	GND	26
24	V4_S2	0.12	V4_S2	27
23	V4_SPLUG	4.93	V4_SPLUG	28
22	GND	0.00	GND	29
21	V4_C	4.41	V4_C	30
20	GND	0.00	GND	31
19	V4_Y	3.93	V4_Y	32
18	GND	0.00	GND	33
17	GND	0.00	GND	34
16	HP_PLUG	0.03	HP_PLUG	35
15	HP_R	2.07	HP_R	36
14	GND	0.00	GND	37
13	HP_L	2.07	HP_L	38
12	GND	0.00	GND	39
11	GND	0.00	GND	40
10	Y_COMP4		Y_COMP4	41
9	GND	0.00	GND	42
8	GND	0.00	GND	43
7	PB_COMP4		PB_COMP4	44
6	GND	0.00	GND	45
5	GND	0.00	GND	46
4	PR_COMP4		PR_COMP4	47
3	GND	0.00	GND	48
2	GND	0.00	GND	49
1	COMP_PLUG		COMP_PLUG	50

B AV BOARD ASSY — **A** MR MAIN BOARD ASSY

CN8652 (AKM1201)		Voltage (V)	CN7454 (AKM1201)	
No.	Name		Name	No.
1	DSUB_DET	0.00	DSUB_DET	50
2	WE_TXT	0.01	WE_TXT	49
3	PN2	0.00	PN2	48
4	VD_TXT	0.00	VD_TXT	47
5	HD_TXT	0.20	HD_TXT	46
6	PCA_V	0.00	PCA_V	45
7	PCA_H	0.00	PCA_H	44
8	PCA_V_SUB	3.35	PCA_V_SUB	43
9	PCA_H_SUB	3.35	PCA_H_SUB	42
10	RXD_DT	3.32	RXD_DT	41
11	TXD_DT	3.33	TXD_DT	40
12	CLAMP_SUB	0.20	CLAMP_SUB	39
13	SUBC_PR	4.44	SUBC_PR	38
14	GND	0.00	GND	37
15	SUBC_Y	4.44	SUBC_Y	36
16	GND	0.00	GND	35
17	SUBC_PB	4.41	SUBC_PB	34
18	GND	0.00	GND	33
19	R_TXT_SUB	4.78	R_TXT_SUB	32
20	G_TXT_SUB	4.78	G_TXT_SUB	31
21	B_TXT_SUB	4.78	B_TXT_SUB	30
22	GND	0.00	GND	29
23	MAINC_PR	4.44	MAINC_PR	28
24	GND	0.00	GND	27
25	MAINC_Y	4.42	MAINC_Y	26
26	GND	0.00	GND	25
27	MAINC_PB	4.43	MAINC_PB	24
28	GND	0.00	GND	23
29	R_TXT_MAIN	4.78	R_TXT_MAIN	22
30	G_TXT_MAIN	4.78	G_TXT_MAIN	21
31	B_TXT_MAIN	4.78	B_TXT_MAIN	20
32	GND	0.00	GND	19
33	B_DA_SUB	0.68	B_DA_SUB	18
34	G_DA_SUB	0.68	G_DA_SUB	17
35	R_DA_SUB	0.68	R_DA_SUB	16
36	GND	0.00	GND	15
37	SUB_C	4.32	SUB_C	14
38	GND	0.00	GND	13
39	SUB_Y	3.20	SUB_Y	12
40	GND	0.00	GND	11
41	B_DA_MAIN	1.08	B_DA_MAIN	10
42	GND	0.00	GND	9
43	G_DA_MAIN	1.08	G_DA_MAIN	8
44	GND	0.00	GND	7
45	R_DA_MAIN	1.08	R_DA_MAIN	6
46	GND	0.00	GND	5
47	MAIN_C	4.41	MAIN_C	4
48	GND	0.00	GND	3
49	MAIN_Y	4.39	MAIN_Y	2
50	GND	0.00	GND	1

B AV BOARD ASSY — **A** MR MAIN BOARD ASSY

CN8654 (AKM1201)		Voltage (V)	CN7455 (AKM1201)	
No.	Name		Name	No.
1	SP_R	0.00	SP_R	50
2	GND	0.00	GND	49
3	SP_L	0.00	SP_L	48
4	GND	0.00	GND	47
5	HDMI_RCH	2.50	HDMI_RCH	46
6	GND	0.00	GND	45
7	HDMI_LCH	2.22	HDMI_LCH	44
8	GND	0.00	GND	43
9	PIXEL_CLK_IN	1.60	PIXEL_CLK_IN	42
10	B4	0.00	B4	41
11	B3	0.00	B3	40
12	B2	0.00	B2	39
13	B1	0.00	B1	38
14	B0	0.00	B0	37
15	G5	0.00	G5	36
16	G4	0.05	G4	35
17	G3	0.05	G3	34
18	G2	0.00	G2	33
19	G1	0.00	G1	32
20	G0	0.00	G0	31
21	R4	0.00	R4	30
22	R3	0.00	R3	29
23	R2	0.00	R2	28
24	R1	0.00	R1	27
25	R0	0.00	R0	26
26	AIR_AFT	3.08	AIR_AFT	25
27	AIR_HS	3.21	AIR_HS	24
28	RST_IF	3.37	RST_IF	23
29	TXD_WR	3.33	TXD_WR	22
30	RXD_WR	3.33	RXD_WR	21
31	SDA_AV	4.99	SDA_AV	20
32	SCL_AV	5.00	SCL_AV	19
33	RXD_IF	3.36	RXD_IF	18
34	TXD_IF	3.33	TXD_IF	17
35	CLK_IF	3.33	CLK_IF	16
36	REQ_IF	0.01	REQ_IF	15
37	BUSY_IF	0.01	BUSY_IF	14
38	CE_IF	3.33	CE_IF	13
39	RESET_TXT	3.29	RESET_TXT	12
40	RELAY	3.17	RELAY	11
41	SR_OUT	3.34	SR_OUT	10
42	PSW1	0.02	PSW1	9
43	PD_MAIN	0.12	PD_MAIN	8
44	CLAMP_MAIN	3.35	CLAMP_MAIN	7
45	WE_ROM_B	0.01	WE_ROM_B	6
46	MON_MUTE	0.01	MON_MUTE	5
47	HP_VOL	0.13	HP_VOL	4
48	KEYSCAN	3.36	KEYSCAN	3
49	STB_MT	0.04	STB_MT	2
50	CST1	0.00	CST1	1

G REG ASSY — **A** MR MAIN BOARD ASSY

CN8651 (KM200NA15)		Voltage (V)	CN7451 (AKM1301)	
No.	Name		Name	No.
15	GND_D	0.00	GND_D	1
14	V+3V_DD	3.38	V+3V_DD	2
13	V+3V_DD	3.28	V+3V_DD	3
12	GND_D	0.00	GND_D	4
11	V+1V_DD	1.48	V+1V_DD	5
10	V+1V_DD	1.48	V+1V_DD	6
9	GND_D	0.00	GND_D	7
8	V+6V	6.75	V+6V	8
7	GND	0.00	GND	9
6	V+5V_AV	5.00	V+5V_AV	10
5	GND	0.00	GND	11
4	V+3V_UCOM	3.34	V+3V_UCOM	12
3	GND	0.00	GND	13
2	V+3V_STB	3.36	V+3V_STB	14
1	GND	0.00	GND	15

B AV BOARD ASSY — **F** LED ASSY

CN8656 (KM200NA7)		Voltage (V)	CN7651 (S7B-PH-SM3)	
No.	Name		Name	No.
1	V+3V_LED	3.37	V+3V_LED	1
2	LED_G	0.04	LED_G	2
3	LED_R	3.37	LED_R	3
4	GND	0.00	GND	4
5	LED_MDM	0.85	LED_MDM	5
6	LED_FCT	3.37	LED_FCT	6
7	GND	0.00	GND	7

A MR MAIN BOARD ASSY — **E** FRONT ASSY

CN7202 (AKM1274)		Voltage (V)	CN9601 (KM200NA3)	
No.	Name		Name	No.
1	5V	5.00	5V	1
2	TEMP1	1.74	TEMP1	2
3	STBGND	0.00	STBGND	3

G REG ASSY — **I** POWER SUPPLY UNIT

CN8501 (KM200NA16)		Voltage (V)	CP51 (KM200NA16)	
No.	Name		Name	No.
1	V+16.5V	19.33	V+16.5V	1
2	GND	-0.01	GND	2
3	V+12V	12.23	V+12V	3
4	V+12V	12.23	V+12V	4
5	GND	-0.01	GND	5
6	GND	-0.01	GND	6
7	V+6.5V	6.80	V+6.5V	7
8	V+6.5V	6.80	V+6.5V	8
9	GND	-0.01	GND	9
10	GND	-0.01	GND	10
11	NC	1.18	NC	11
12	V+3V_STB	3.37	V+3V_STB	12
13	GND	-0.01	GND	13
14	RELAY	3.17	RELAY	14
15	PD_TRIGGER	0.12	PD_TRIGGER	15
16	AC_DET	3.35	AC_DET	16

B AV BOARD ASSY — **D** SR ASSY

CN8658 (AKM1233)		Voltage (V)	CN9452 (CKS3826)	
No.	Name		Name	No.
1	V+5V_SR	5.06	V+5V_SR	12
2	V+3V_SR	3.40	V+3V_SR	11
3	TXD	3.36	TXD	10
4	RXD	3.36	RXD	9
5	NC	3.37	NC	8
6	SR_EN_B	3.36	SR_EN_B	7
7	GND	0.00	GND	6
8	SR_OUT	3.34	SR_OUT	5
9	SR_IN	3.37	SR_IN	4
10	GND	0.00	GND	3
11	NC		NC	2
12	GND	0.00	GND	1

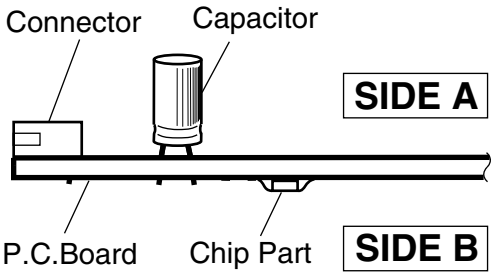
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

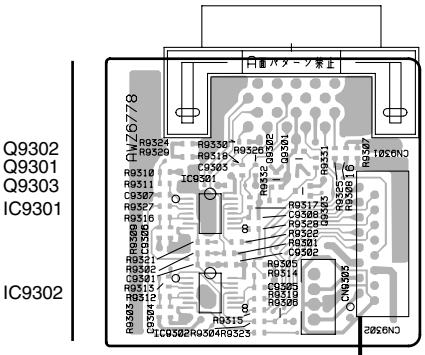
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 AC SW and MDR ASSYS

SIDE A

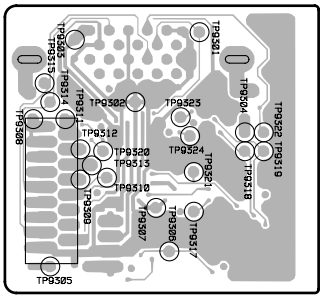
C MDR ASSY



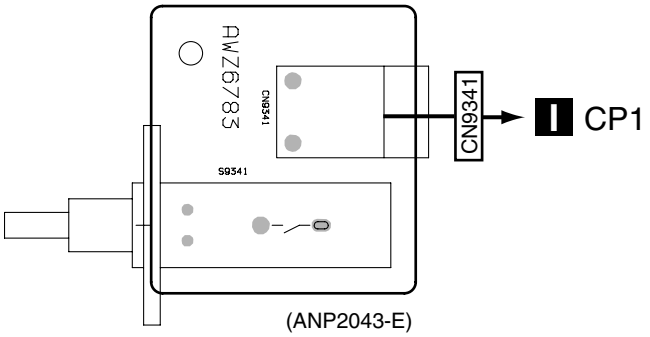
A CN7402

SIDE B

C MDR ASSY

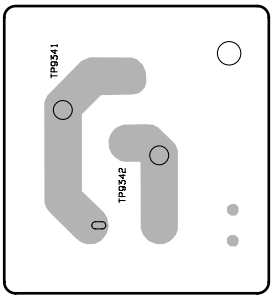


H AC SW ASSY



I CP1

H AC SW ASSY



C H

C H

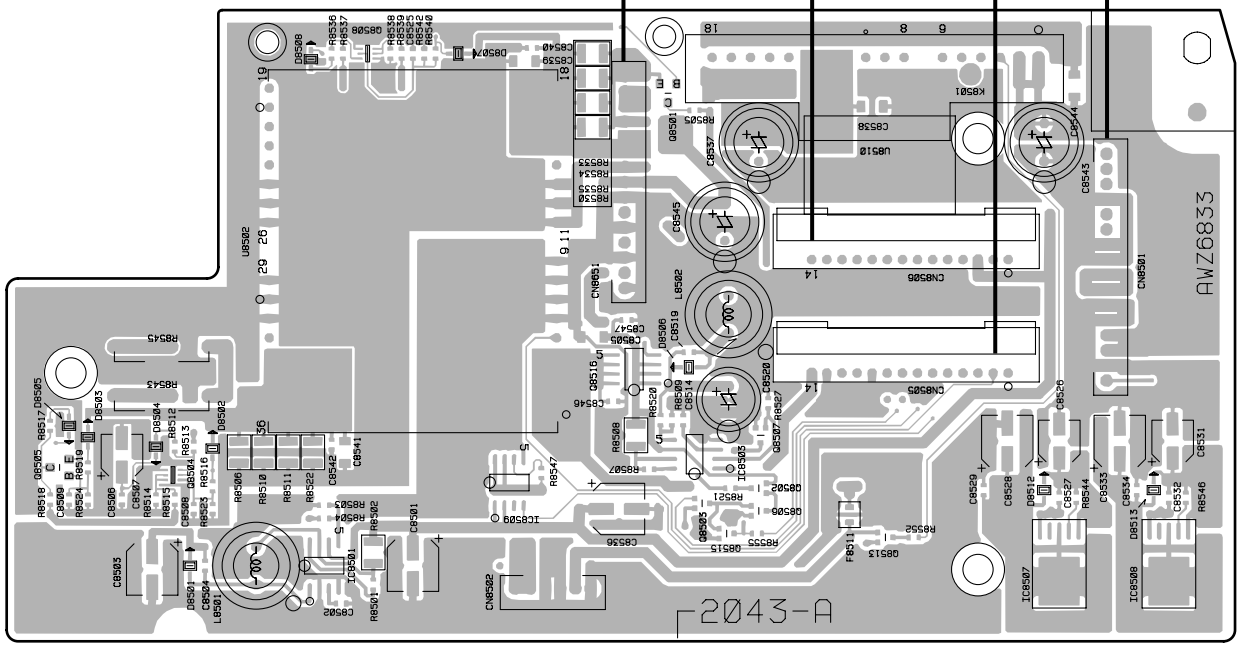
4.2 REG ASSY

SIDE A

SIDE A

A CN7451 **B F** CN8504 **B F** CN8503 **I** CP51

G F REG ASSY



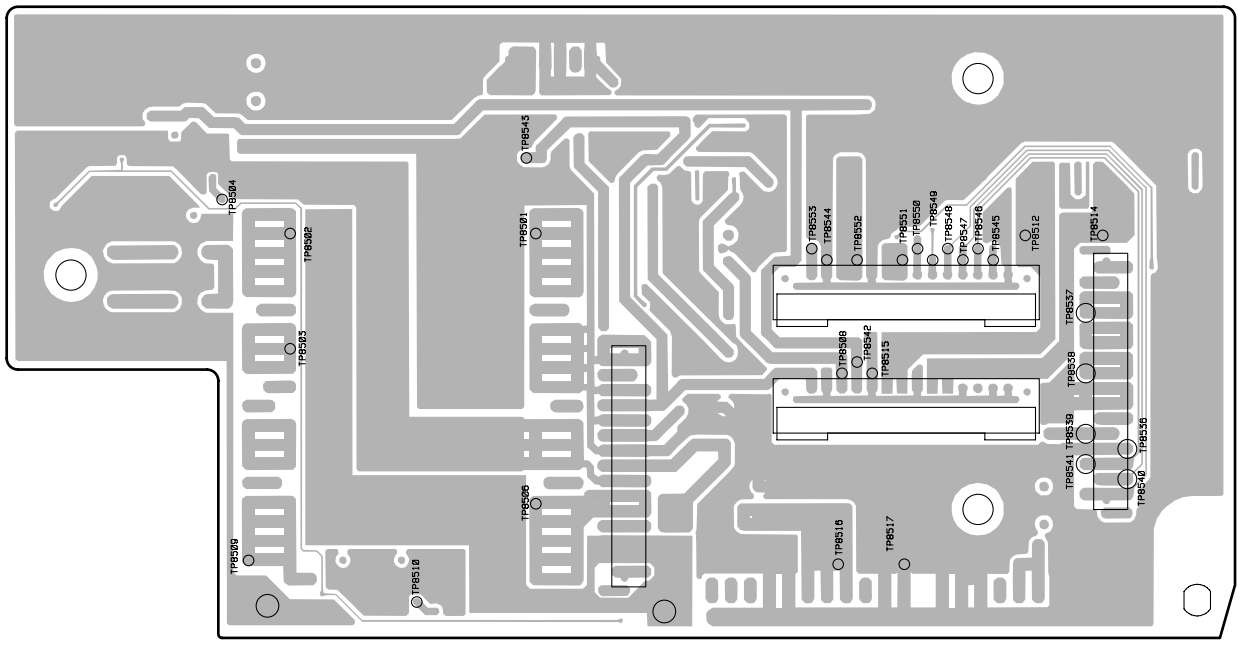
Q8505 Q8504 IC8501 Q8508 IC8509 Q8516 Q8501 IC8503 Q8507 Q8513 IC8507 IC8508
Q8503 Q8515 Q8506 Q8502

(ANP2044-B)

SIDE B

SIDE B

G F REG ASSY



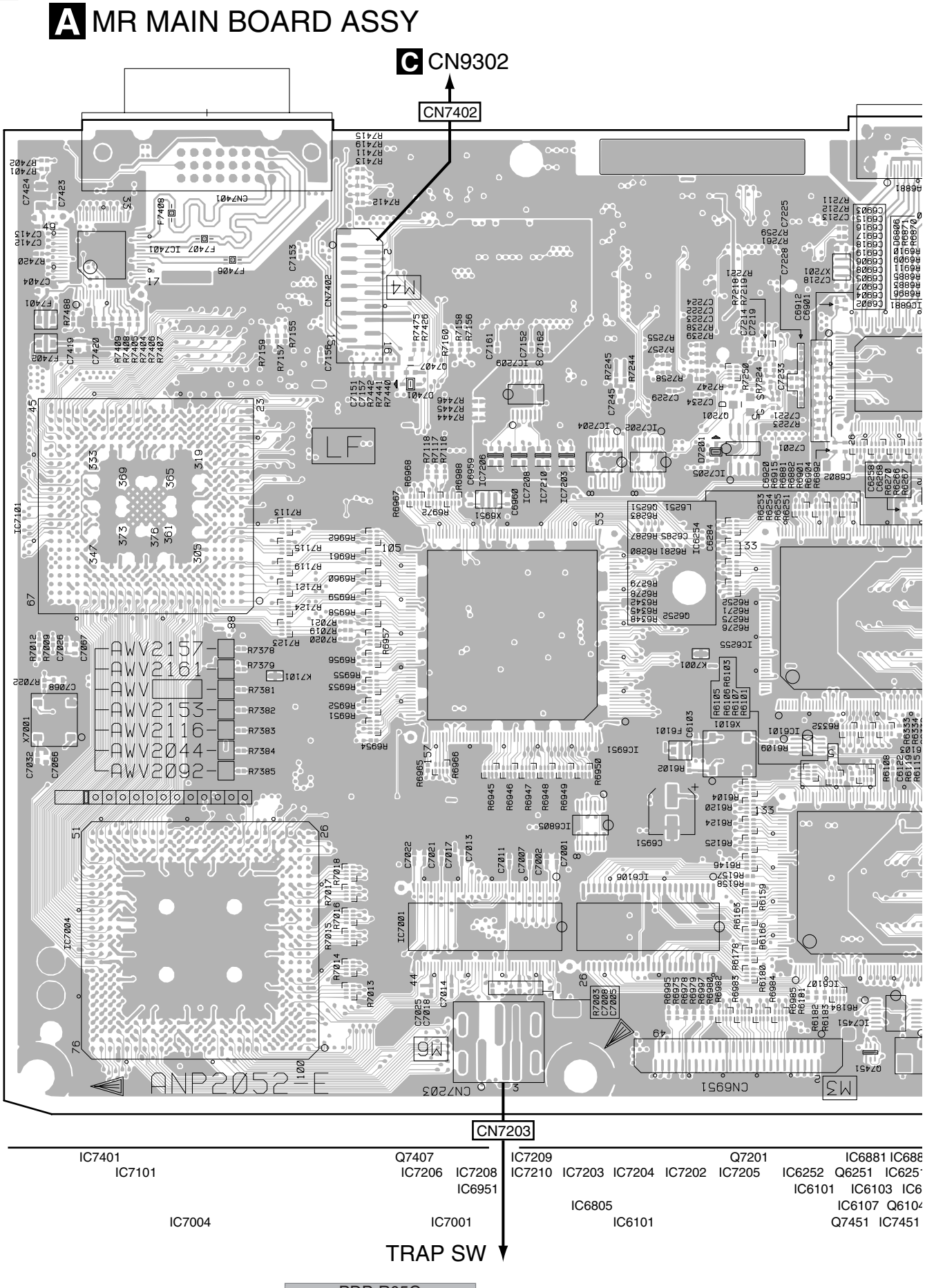
(ANP2044-B)

G F

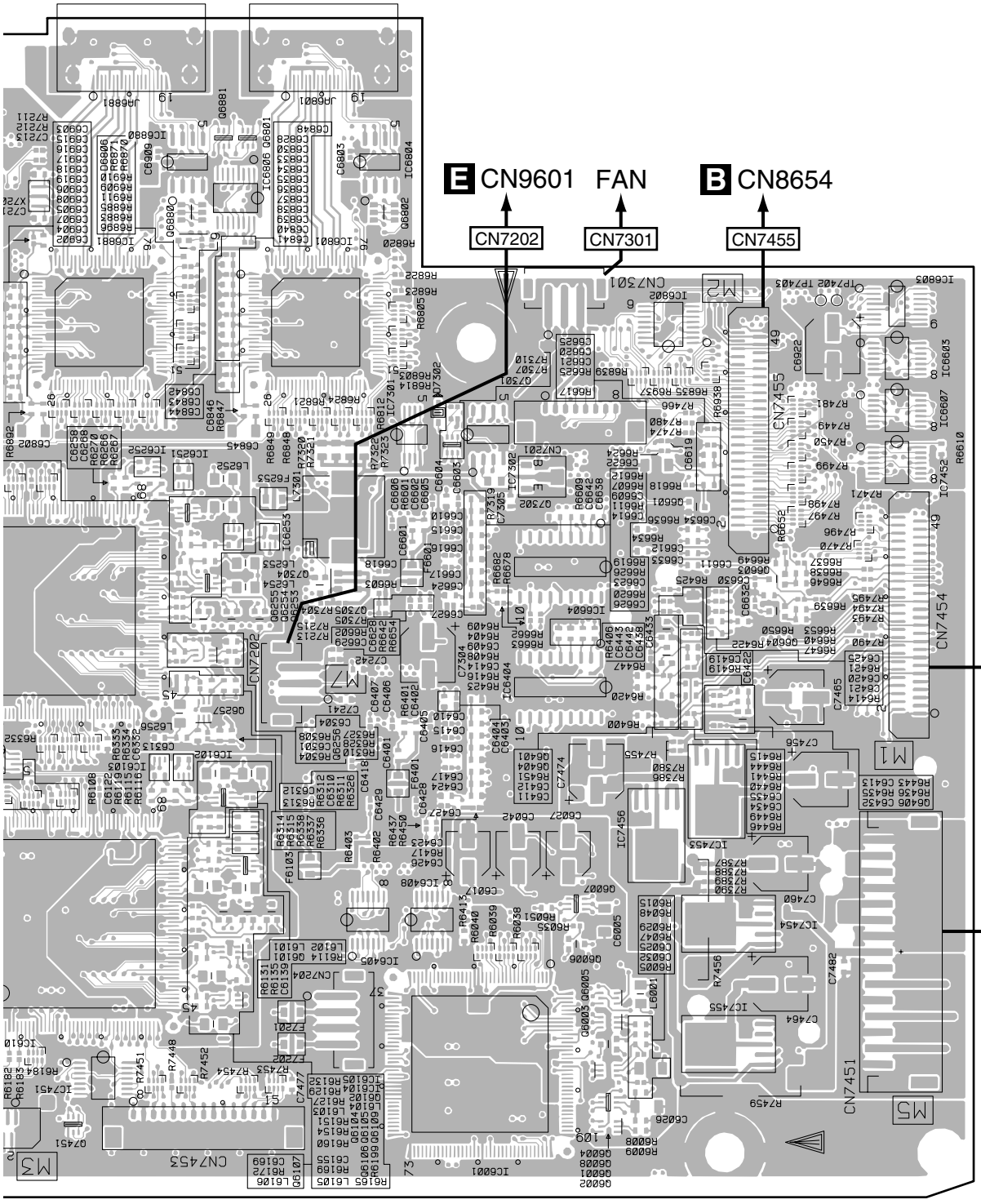
G F

4.3 MR MAIN BOARD ASSY

SIDE A



SIDE A



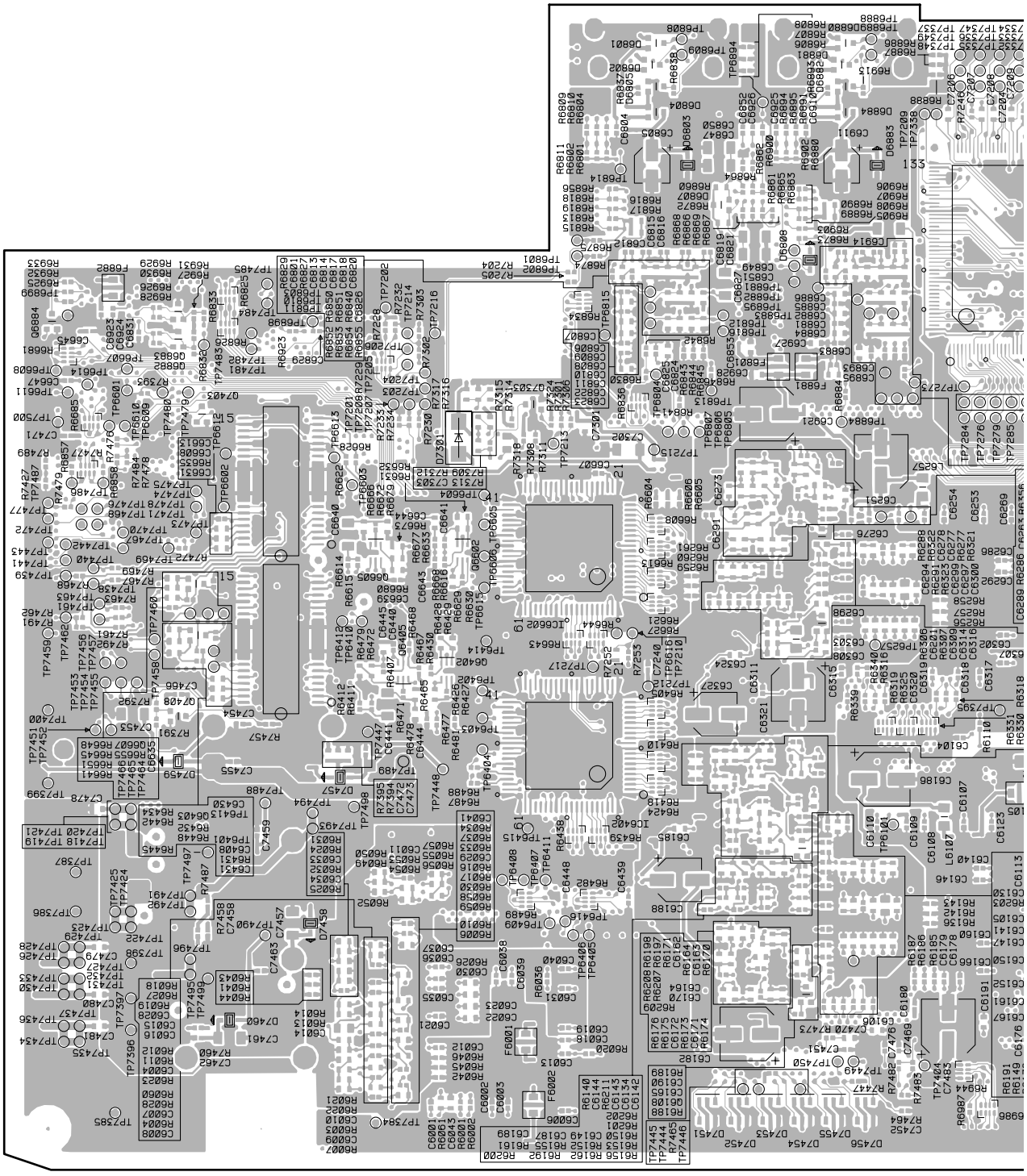
(ANP2052-E)

IC6881 IC6880 Q6881 Q6880 IC6806 Q6801 IC6801 Q6802 IC6804 Q7301 IC6802 IC6603 IC6803 IC6607
52 Q6251 IC6251 Q6255 Q6252 IC6254 IC6253 IC7301 Q7301 IC7302 Q7302 Q6601 Q6603 IC7452
5101 IC6103 IC6102 Q6257 Q6256 Q6254 Q6253 Q6201 Q7305 IC6404 IC6604 Q6401 Q6404 Q6406 Q6604
IC6107 Q6104 Q6101 Q6102 Q6105 Q6109 IC6405 IC6408 Q6006 Q6007 IC7456 IC7454 IC7453
Q7451 IC7451 Q6107 Q6106 IC6001 Q6003 Q6008 Q6005 Q6004 Q6001 Q6002 IC7455

A

SIDE B

A MR MAIN BOARD ASSY



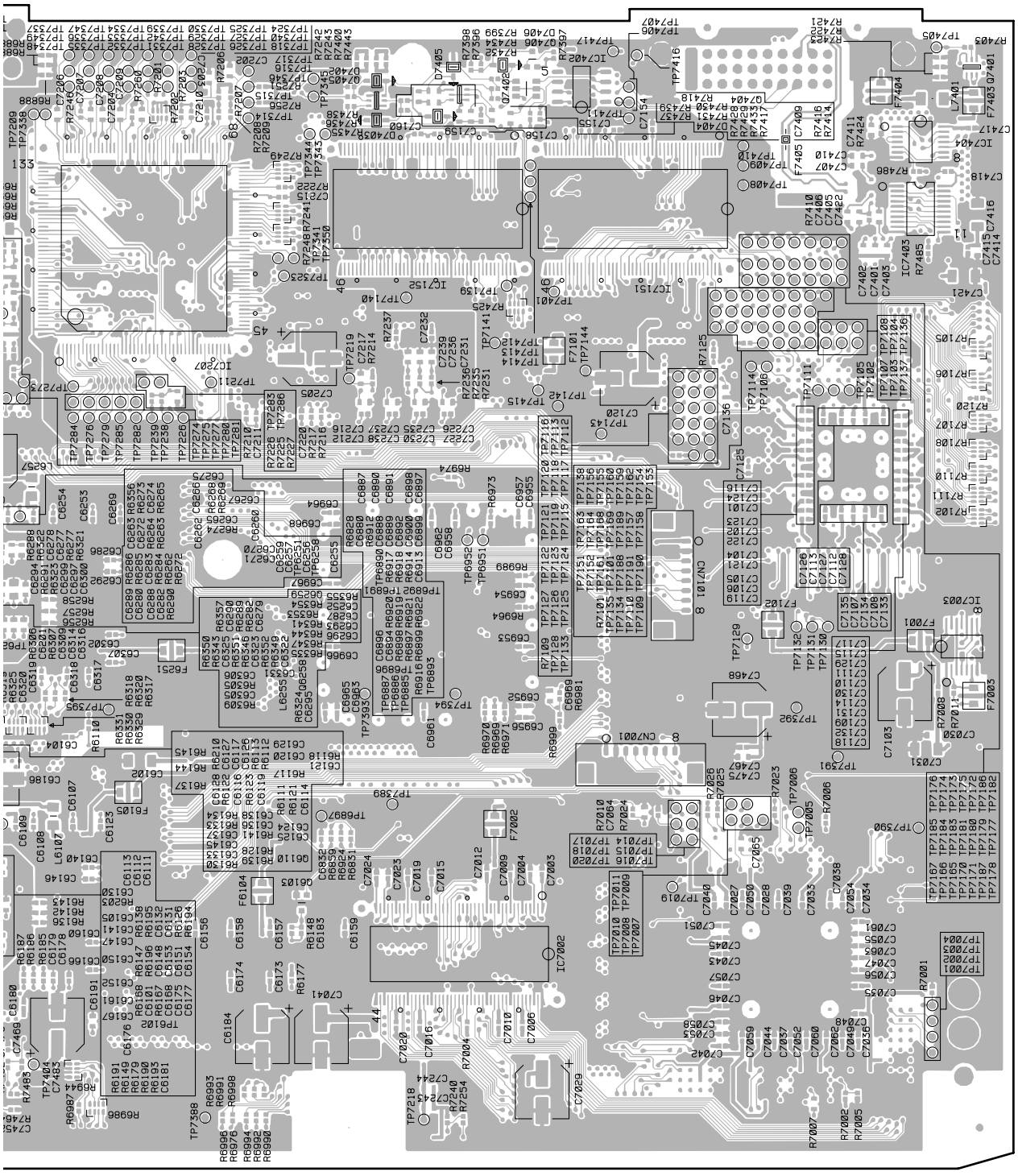
Q6884 Q6883 Q6882 IC7207

Q7408 Q7403 Q6607 Q6605 Q6405 Q6402 Q6602 IC6602 IC6402 Q6258 Q6259

Q6110 Q6108

A

SIDE B

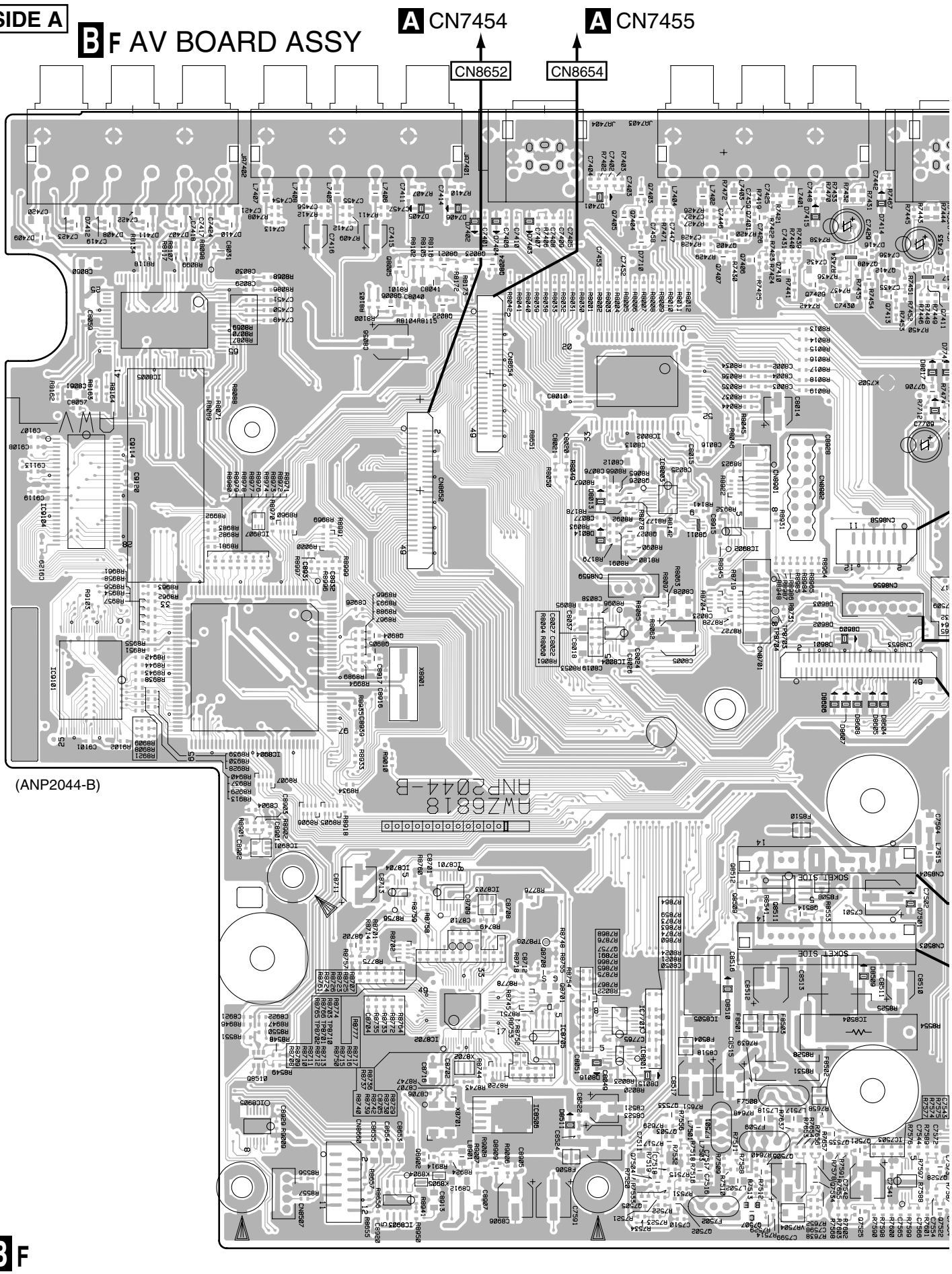


(ANP2052-E)

IC7207 Q7405 IC7152 Q7404 Q7406 Q7402 IC7151 IC7404 IC7403 Q7401 IC7003

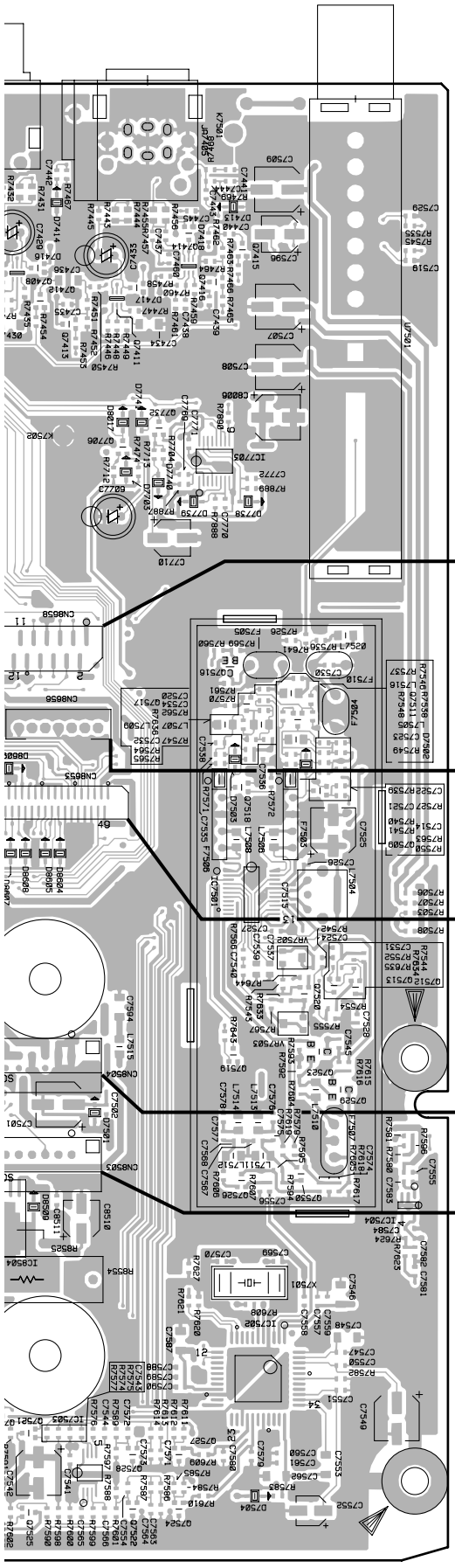
Q6103 IC7002

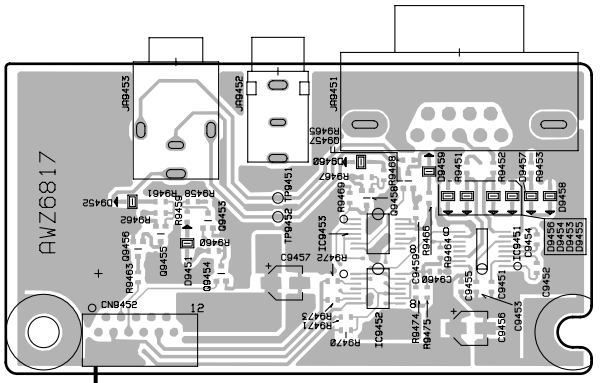
4.4 AV BOARD and SR ASSYS



SIDE A

DF SR ASSY





(ANP2044-B)

CN9452

Q9455 Q9453 IC9453 Q9457 IC9451
Q9456 Q9454 IC9452 Q9458

CN8658

Q7403 Q7405 Q7404 Q7401 Q7414 Q7402 Q7415 Q7408 Q7407 Q7406 Q7416 Q7410 Q7411 Q7412 Q7409 Q7413
Q8021 Q8022 Q8024 Q8005 Q8022 Q8006 IC8005
IC8002 Q7732 Q7706 IC7703
IC9104 IC8003 IC8907 Q8027 IC8902 Q7716 Q7517

CN8656

IC8004 Q8904 Q8905 IC8904 IC9101 Q7518 Q7509

F CN7651

CN8653

L7504 IC7501

E CN9502

VR7502 Q7513 Q7512 Q7520 VR7503 Q7523 IC8901 Q7519 Q8512 IC8704 Q7529 IC8701 Q8511

CN8504

G F CN8506

IC8703 Q8509 IC8703 Q8514 Q8702 Q7530 Q7526 IC7504

CN8503

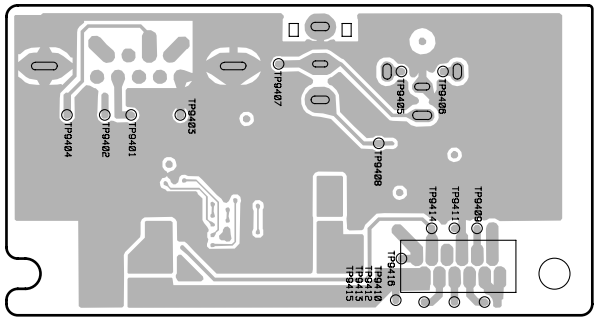
G F CN8505

Q8701 Q7757 IC8504 IC8505 IC7701 IC8702 IC8705 IC8001 Q8510 IC8506 IC8905 IC7503 Q8902 Q8909 IC8903 Q7503 Q7521 Q7527 Q7528 Q7506 Q7504 Q7534 Q7505 Q7502 Q7522 Q7524 Q7525 Q7507 VR7504

BF DF

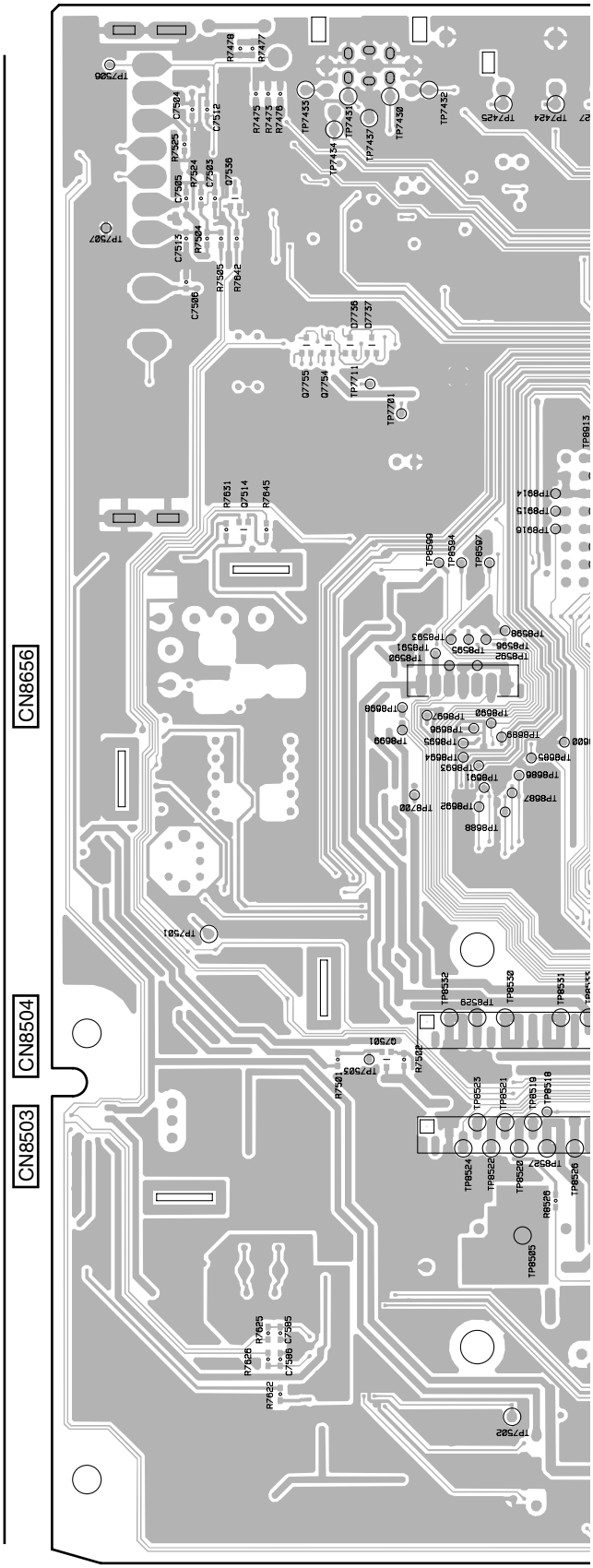
SIDE B

DF SR ASSY



(ANP2044-B)

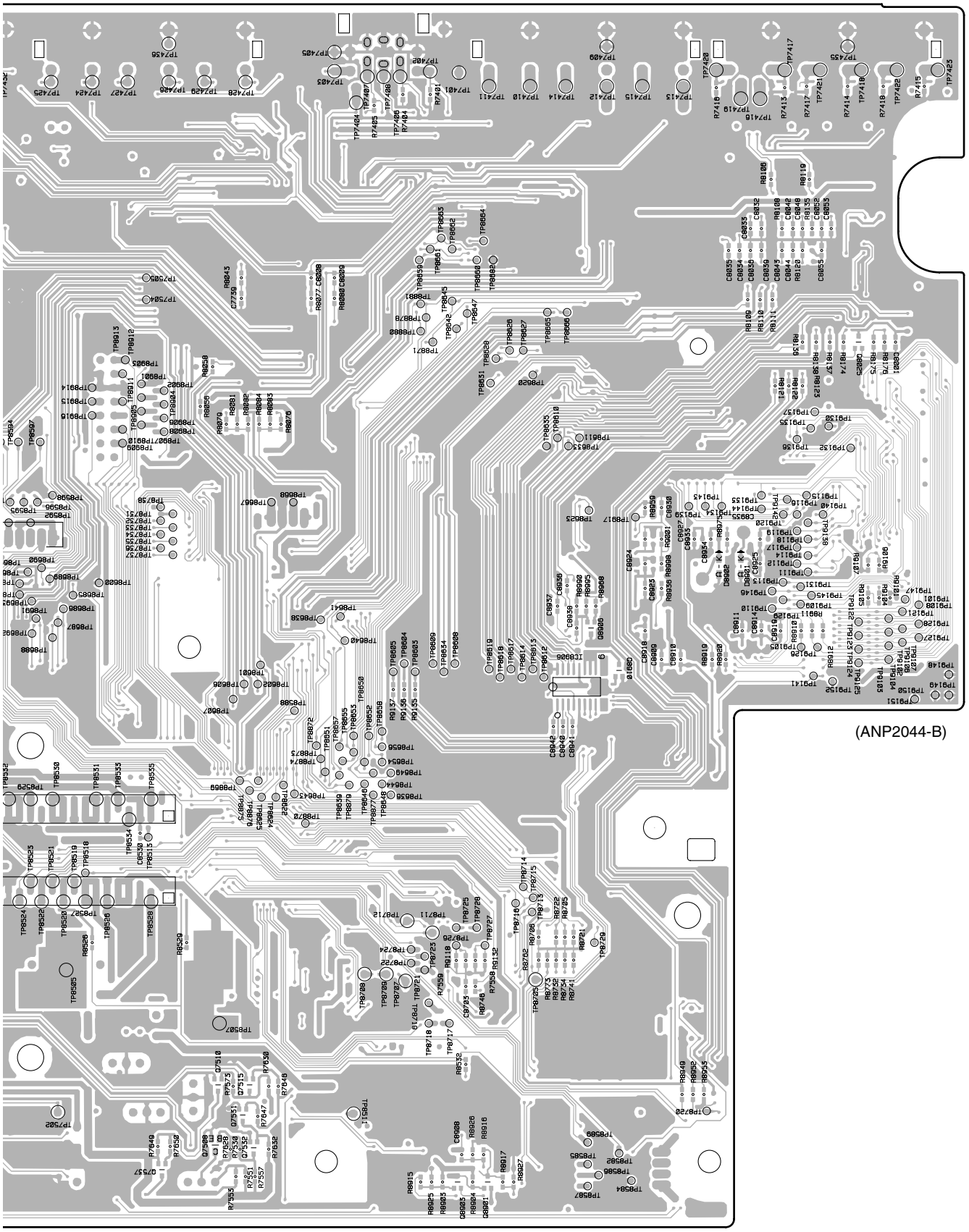
CN9452



BF DF

SIDE B

BF AV BOARD ASSY



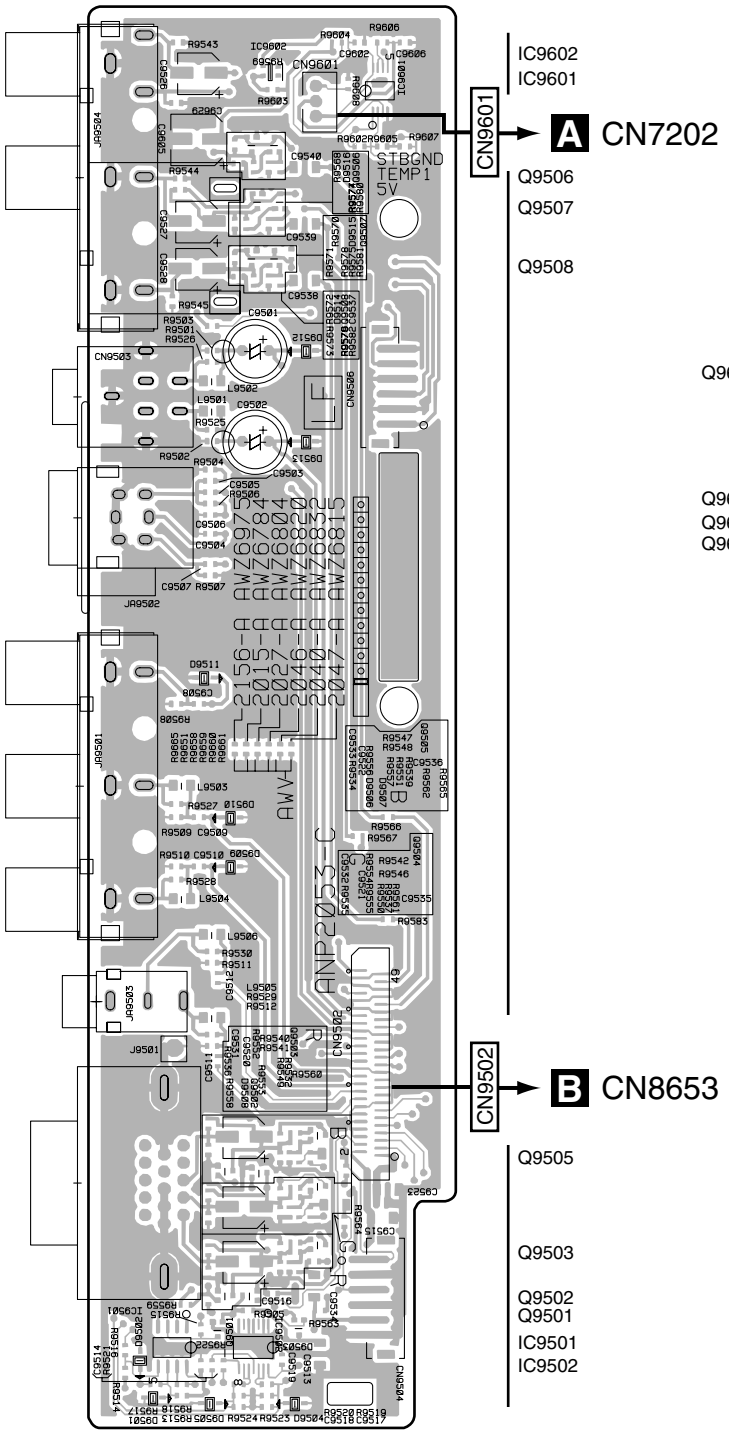
(ANP2044-B)

4.5 FRONT and LED ASSYS

SIDE A

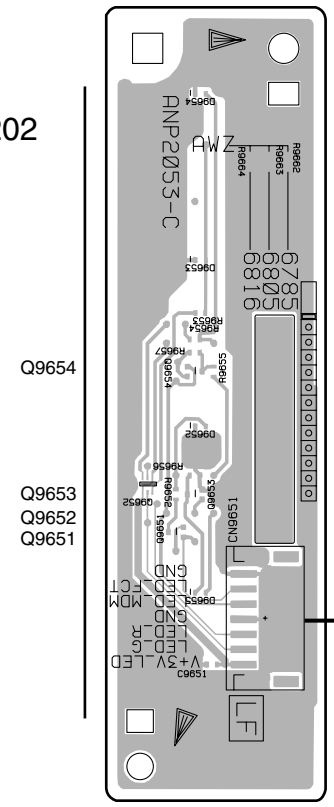
SIDE A

E FRONT ASSY



(ANP2053-C)

F LED ASSY



(ANP2053-C)

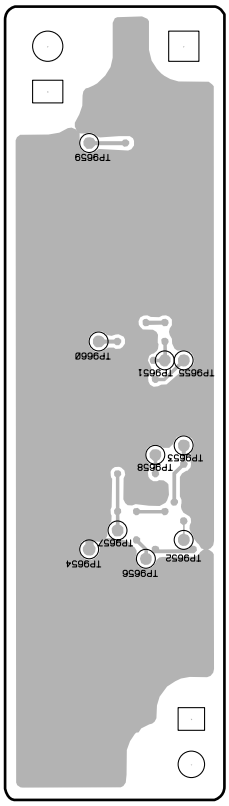
E F

E F

SIDE B

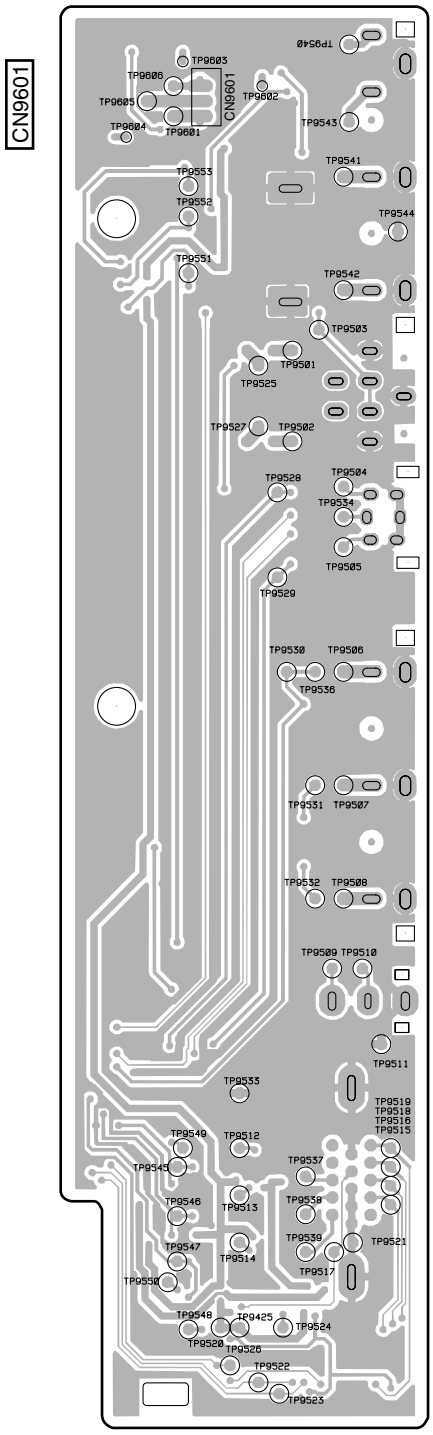
SIDE B

F LED ASSY



(ANP2053-C)

E FRONT ASSY



(ANP2053-C)

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10[1]* →	*561*	*RD1/4PU 5 6 1 J*
47k Ω	→ *47 x 10[3]* →	*473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*	*RN2H R 5 0 K*
1 Ω	→	*1R0*	*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10[1]* →	*5621*	*RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	MR AV BOARD ASSY	AWV2164
	2	AV BOARD ASSY	AWZ6982
	2	REG ASSY	AWZ6833
	2	MDR ASSY	AWZ6778
	2	SR ASSY	AWZ6817
	2	AC SW ASSY	AWZ6783
NSP	1	MR FUKUGOU BOARD ASSY	AWV2156
	2	FRONT ASSY	AWZ6975
	2	LED ASSY	AWZ6816
	1	MR MAIN BOARD ASSY	AWV2157
⚠	1	POWER SUPPLY UNIT	AXY1093

A MR MAIN BOARD ASSY

[MICHAEL BLOCK]

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC6107,IC6255	PD0278A
		IC6101	TC7W126FU
		Q6108,Q6258	2SA1586
		Q6101,Q6102,Q6251,Q6252	HN1A01FU
		Q6106,Q6107,Q6256,Q6257	HN1B04FU

COILS AND FILTERS

		F6101,F6103,F6105,F6251,F6253	ATF1194

EMI FILTER

		L6107,L6257	LCTAW220J2520
		L6101,L6103,L6105,L6106,L6251	LCTAW6R8J2520
		L6253,L6255,L6256	LCTAW6R8J2520

CAPACITORS

		C6188,C6327	ACH1357
		C6186	ACH1364
		C6182,C6251,C6321(100uF/6.3V)	ACH1396
		C6126,C6142,C6163,C6164	CCSRCH330J50
		C6171,C6172,C6272,C6288	CCSRCH330J50
		C6305,C6306,C6312,C6313	CCSRCH330J50
		C6127,C6143,C6273,C6289	CCSRCH680J50
		C6151,C6297	CKSQYB225K10
		C6112,C6114,C6258,C6260	CKSRYB102K50
		C6119,C6136,C6153,C6154,C6168	CKSRYB104K16
		C6177,C6185,C6265,C6282	CKSRYB104K16
		C6299,C6300,C6309,C6316,C6324	CKSRYB104K16
		C6101,C6155,C6169,C6175,C6190	CKSRYB105K10
		C6201,C6295,C6301,C6310,C6314	CKSRYB105K10
		C6103,C6104,C6107-C6111,C6113	CKSSYF104Z16
		C6116,C6123-C6125,C6130-C6133	CKSSYF104Z16
		C6140,C6141,C6146-C6148,C6150	CKSSYF104Z16
		C6152,C6160-C6162,C6165-C6167	CKSSYF104Z16
		C6170,C6176,C6178-C6181	CKSSYF104Z16
		C6253-C6257,C6259,C6262	CKSSYF104Z16
		C6269-C6271,C6276-C6279	CKSSYF104Z16
		C6286,C6287,C6292-C6294,C6296	CKSSYF104Z16
		C6298,C6302-C6304,C6307,C6308	CKSSYF104Z16
		C6311,C6315,C6317-C6320,C6331	CKSSYF104Z16
		C6102 (10uF/16V)	DCH1165

RESISTORS

		R6101,R6104-R6106,R6120	RAB4CQ100J
		R6124,R6125,R6251-R6254,R6271	RAB4CQ100J
		R6275,R6276	RAB4CQ100J
		R6329-R6331	RAB4CQ103J
		R6210,R6211,R6356,R6357	RS1/16S0R0J
		R6194-R6196,R6321-R6323	RS1/16S1000F
		R6115,R6131,R6266,R6283	RS1/16S100J
		R6197,R6207,R6326,R6336	RS1/16S103J
		R6147,R6291	RS1/16S1301F
		R6198,R6208,R6327,R6337	RS1/16S183J
		R6113,R6129,R6264,R6281	RS1/16S221J
		R6126,R6138,R6277,R6288	RS1/16S2701F
		R6112,R6123,R6128,R6141,R6165	RS1/16S271J
		R6175,R6263,R6274,R6280,R6290	RS1/16S271J
		R6305,R6314	RS1/16S271J
		R6170,R6171,R6174,R6176	RS1/16S331J
		R6309,R6310,R6313,R6315	RS1/16S331J
		R6169,R6172,R6189,R6308,R6311	RS1/16S471J
		R6335	RS1/16S471J
		R6122,R6140,R6273,R6289	RS1/16S473J
		R6167,R6168,R6306,R6307	RS1/16S8201F
		Other Resistors	RS1/16SS###J

OTHERS

		X6101 CRYSTAL OSCILLATOR (27MHz)	ASS1175

[AD BLOCK]

SEMICONDUCTORS

		IC6402,IC6602	AD9883AKST-110
		IC6404,IC6604	BA7078AF
		IC6401,IC6601	SM5301BS

Mark No.	Description	Part No.
	IC6405,IC6408,IC6603,IC6607	TC74VHC126FT
	Q6402,Q6405,Q6602,Q6605	HN1B04FU
	Q6401,Q6601	RN1303
COILS AND FILTERS		
	F6401,F6601 EMI FILTER	ATF1194
CAPACITORS		
	C6445,C6644	CCSRCH221J50
	C6438,C6638	CKSRYB103K50
	C6404,C6424,C6604,C6624	CKSRYB104K16
	C6408,C6411,C6412,C6431	CKSRYB105K10
	C6434,C6435,C6608,C6611,C6612	CKSRYB105K10
	C6631,C6633,C6634	CKSRYB105K10
	C6421,C6621	CKSRYB105K6R3
	C6442,C6641	CKSRYB223K50
	C6409,C6414,C6423,C6609,C6614	CKSRYB473K16
	C6623	CKSRYB473K16
	C6443,C6642	CKSRYB474K10
	C6402,C6602	CKSRYB822K50
	C6401,C6601	CKSRYB823K16
	C6405-C6407,C6410,C6413	CKSSYF104Z16
	C6415-C6420,C6425,C6427-C6429	CKSSYF104Z16
	C6439,C6440,C6444,C6448	CKSSYF104Z16
	C6605-C6607,C6610,C6613	CKSSYF104Z16
	C6615-C6620,C6625,C6627-C6629	CKSSYF104Z16
	C6639,C6643,C6645,C6647	CKSSYF104Z16
	C6422,C6441,C6622,C6640 (10uF/16V)	DCH1165
RESISTORS		
	R6482,R6489,R6681,R6685	RAB4CQ101J
	R6405,R6410,R6418,R6424	RAB4CQ330J
	R6438,R6439,R6608,R6613,R6621	RAB4CQ330J
	R6627,R6643,R6644	RAB4CQ330J
	R6409,R6416,R6417,R6612	RS1/16S1000F
	R6619,R6620	RS1/16S1000F
	R6426,R6429,R6629,R6632	RS1/16S102J
	R6406,R6609	RS1/16S104J
	R6422,R6625	RS1/16S1101F
	R6404,R6408,R6423,R6607,R6611	RS1/16S1500F
	R6626	RS1/16S1500F
	R6428,R6631	RS1/16S181J
	R6472,R6673	RS1/16S221J
	R6479,R6680	RS1/16S222J
	R6414,R6617	RS1/16S224J
	R6401,R6601	RS1/16S2701F
	R6478,R6679	RS1/16S273J
	R6413,R6465,R6610,R6666	RS1/16S472J
	Other Resistors	RS1/16SS###J

[HDMI RX BLOCK]

SEMICONDUCTORS		
	IC6880	24LC02B(I)SN
	IC6803	PCM1742KE
	IC6881	SII9993CTG100
	IC6806	TC74HC4538AFT
	Q6884	RN1303
	Q6881	RN1902
	Q6880	SM6K2
	D6880,D6881	1SS302
	D6806,D6807,D6884	DAN202U
	D6883	UDZS6.8B
COILS AND FILTERS		
	F6881,F6882 EMI FILTER	ATF1194
CAPACITORS		
	C6911 (22uF/6.3V)	ACH1362
	C6921,C6922 (100uF/6.3V)	ACH1364
	C6880,C6882,C6884,C6886	CCSRCH101J50
	C6888,C6889,C6892,C6895,C6896	CCSRCH101J50
	C6899-C6902,C6905,C6906,C6915	CCSRCH101J50
	C6917,C6919	CCSRCH101J50
	C6913	CKSRYF103Z50
	C6920	CKSRYF473Z50
	C6831,C6848,C6881,C6883,C6885	CKSSYF104Z16
	C6887,C6890,C6891,C6893,C6894	CKSSYF104Z16
	C6897,C6898,C6903,C6904	CKSSYF104Z16
	C6907-C6910,C6912,C6916,C6918	CKSSYF104Z16
	C6923-C6926	CKSSYF104Z16
	C6802,C6849,C6851,C6914 (10uF/16V)	DCH1165
RESISTORS		
	R6826,R6881-R6883,R6885,R6892	RAB4CQ101J
	R6896,R6901,R6904	RAB4CQ101J
	R6914	RS1/16S1500F
	R6889	RS1/16S3900F
	R6915	RS1/16S3901F
	R6872	RS1/16S473J
	R6917-R6922	RS1/16S75R0F
	Other Resistors	RS1/16SS###J
OTHERS		
	JA6881 HDMI CONNECTOR	AKP1232

[ROZ BLOCK]

SEMICONDUCTORS		
	IC6951	PD6435A
CAPACITORS		
	C6951 (100uF/6.3V)	ACH1364
	C6959,C6960	CCSRCH150J50
	C6952-C6954,C6956-C6958	CKSSYF104Z16
	C6961,C6962,C6964-C6968	CKSSYF104Z16
RESISTORS		
	R6951-R6953,R6956-R6962,R6966	RAB4CQ100J
	R6968,R6972	RAB4CQ100J
	R6945,R6946,R6988	RAB4CQ103J
	Other Resistors	RS1/16SS###J
OTHERS		
	X6951 CERAMIC RESONATOR	ASS1169

[CELIA BLOCK]

SEMICONDUCTORS		
	IC7001,IC7002	HY57V643220CT-7
	IC7004	PE5362A
	IC7003	TC74LCX125FT
COILS AND FILTERS		
	F7001,F7002 EMI FILTER	ATF1194
CAPACITORS		

Mark	No.	Description	Part No.
	C7029,C7041	(100uF/6.3V)	ACH1364
	C7064		CCSRCH100D50
⚠	C7025,C7066,C7067		CCSRCH221J50
	C7001-C7024,C7026-C7028		CKSSYF104Z16
	C7032-C7040,C7042-C7063		CKSSYF104Z16
	C7031	(10uF/16V)	DCH1165

RESISTORS

R7013-R7018		RAB4CQ220J
R7007		RS1/16S220J
Other Resistors		RS1/16SS###J

OTHERS

X7001	CRYSTAL OSCILLATOR (85MHz)	ASS1174

[MIKE BLOCK]

SEMICONDUCTORS

IC7152		
MBM29PL3200BE70PFV		
IC7101		PD5855A

COILS AND FILTERS

F7101,F7102	EMI FILTER	ATF1194

CAPACITORS

C7103,C7120	(100uF/6.3V)	ACH1364
C7101,C7102,C7104-C7119		CKSSYF104Z16
C7121-C7135,C7158,C7160-C7162		CKSSYF104Z16

RESISTORS

R7113,R7115,R7119,R7121		RAB4CQ101J
R7123,R7124		RAB4CQ101J
R7102,R7105-R7108,R7110,R7111		RAB4CQ330J
Other Resistors		RS1/16SS###J

[MAIN UCOM BLOCK]

SEMICONDUCTORS

IC7205		24LC128(I)SN
IC7207		MB91F355APMTGE1
IC7210		PST3612UR
IC7203,IC7206		PST3628UR
IC7209		TC74VHC08FT
IC7202		TC74VHC125FT
Q7201		2SJ461A
D7201		1SS355

CAPACITORS

C7205	(100uF/6.3V)	ACH1364
C7213,C7218		CCSRCH7R0D50
C7201		CKSRYB103K50
C7226,C7237		CKSRYB104K16
C7216		CKSRYB472K50
C7217		CKSRYF103Z50
C7209-C7212,C7214,C7215,C7219		CKSSYF104Z16
C7221-C7225,C7227-C7229		CKSSYF104Z16
C7232-C7234,C7238,C7240		CKSSYF104Z16

RESISTORS

R7221,R7229,R7241,R7248-R7250		RAB4CQ101J
R7201		RAB4CQ472J
R7227,R7252		RS1/16S473J
R7224		RS1/16S682J
Other Resistors		RS1/16SS###J

Mark	No.	Description	Part No.

OTHERS

CN7203	3P CONNECTER	AKM1213
CN7201	PLUG 8-P	AKM1225
CN7202	3P CONNECTOR	AKM1274
X7201	CERAMIC RESONATOR	ASS1170

[MR I/F BLOCK]

SEMICONDUCTORS

IC7456		PQ015YZ01ZP
IC7454		PQ05DZ11
IC7453		PQ3DZ13
IC7401		SII170BCLG64
IC7404		TC74VCX08FT
IC7403		TC74VCX574FT
IC7451		TC74VHC08FT
Q7406		2SA1586
Q7405		HN1C01FU
Q7403,Q7407,Q7408		RN1303
Q7451		RN1901
Q7401		RN1902
Q7404		RN2901
D7401-D7406,D7457		1SS355

COILS AND FILTERS

F7401-F7404	EMI FILTER	ATF1194
L7401	(3.3uH)	ATH1132

CAPACITORS

C7474	(330uF/6.3V)	ACH1365
C7456,C7460,C7465,C7468	(100uF/6.3V)	ACH1396
C7401,C7402		CCSRCH100D50
⚠ C7475,C7477		CCSRCH221J50
C7403,C7404,C7406,C7407		CCSRCH820J50
C7410,C7411,C7413,C7414,C7419		CCSRCH820J50
C7405,C7412,C7415,C7417,C7418		CKSSYF104Z16
C7420,C7423,C7451,C7452		CKSSYF104Z16
C7454,C7455,C7458,C7459		CKSSYF104Z16
C7466,C7467,C7469,C7473,C7476		CKSSYF104Z16
C7416,C7421,C7424,C7457	(10uF/16V)	DCH1165

RESISTORS

R7425,R7449-R7452,R7454		RAB4CQ101J
R7496-R7499		RAB4CQ101J
R7453		RAB4CQ103J
R7394		RS1/16S1001F
R7428,R7430		RS1/16S272J
R7395,R7410		RS1/16S5100F
R7456		RS2LMFR82J
Other Resistors		RS1/16SS###J

OTHERS

CN7454,CN7455	50P CONNECTOR	AKM1201
CN7453	PLUG 15-P	AKM1232
CN7402	16P FFC CONNECTOR	AKM1234
CN7451	15P CONNECTOR	AKM1301

[REGULATOR BLOCK]

SEMICONDUCTORS

IC7302		M5291FP
IC7301		NJM12904V
IC7452		TC74VHC126FT

Mark	No.	Description	Part No.
	Q6104,Q6105,Q6109,Q6253-Q6255		2SA1586
	Q7303		2SA1586
	Q7302		2SD1664
	Q7301		HN1C01FU
	Q7304		RN1303
	Q7305		TPC6104
	D7302		1SS355
	D7301		D1FL20U(S)

COILS AND FILTERS

	F7405-F7408 EMI FILTER	ATF1209
	L7301	ATH1127

CAPACITORS

	C7483 (330uF/6.3V)	ACH1365
	C7304 (100uF/16V)	ACH1394
	C7244	CCSRCH100D50
	C7202,C7203	CCSRCH101J50
	C7301	CCSRCH102J50
	C6927,C6928,C7241-C7243,C7245	CCSRCH221J50
	C7478-C7482	CCSRCH221J50
	C7303	CCSRCH681J50
⚠	C7068	CKSRYB104K16
	C6149,C6187,C6189,C6322,C6323	CKSSYF104Z16
	C6325,C7471	CKSSYF104Z16
	C7302,C7453 (10uF/16V)	DCH1165

RESISTORS

	R6332-R6334	RAB4CQ0R0J
	R7477	RAB4CQ101J
	R6834,R6836,R6944,R6947-R6950	RAB4CQ103J
	R6835,R6839,R6937,R6938	RAB4CQ470J
	R7319	RS1/10S0R0J
	R7320-R7323	RS1/10S1R2J
	R7318	RS1/10S681J
	R7312	RS1/16S1101F
	R7417,R7418,R7429,R7431	RS1/16S111J
	R7316	RS1/16S1201F
	R7309	RS1/16S1501F
	R7315	RS1/16S3901F
	R7317	RS1/16S8201F
	R7459	RS2LMF3R9J
	Other Resistors	RS1/16SS###J

OTHERS

	CN7301 3P CONNECTOR	AKM1274
	CN7401 DVI SOCKET (24P)	AKP1250

B AV BOARD ASSY

[TUNER BLOCK]

SEMICONDUCTORS

	IC7502	MSP3455G
	IC7504	PST9246N
	IC7501	TDA9818TS
	Q7503,Q7504,Q7506,Q7513,Q7522	2SA1586
	Q7524,Q7527,Q7528	2SA1586
	Q7507	2SC2712
	Q7511,Q7517	2SC4082
	Q7501,Q7502,Q7505,Q7509,Q7510	2SC4116
	Q7512,Q7515,Q7518,Q7521	2SC4116
	Q7525,Q7526,Q7530-Q7535	2SC4116
	Q7508	2SC4213
	Q7537	RN2303
	D7504	1SS355
	D7502,D7503	1SS356
	D7501	UDZS33B

COILS AND FILTERS

	F7502 CERAMIC TRAP	BTF1121
	L7501,L7502	LCTAW100J2520
	L7512,L7513	LCTAW150J2520
	L7514	LCTAW4R7J2520
	L7511	LCTAW8R2J2520
	L7520	LCTAWR22J2520
	L7516	LCTAWR27J2520
	L7505,L7507	LCTAWR68J2520
	F7506 SAW FILTER	VTF1177
	F7503 SAW FILTER	VTF1178
	F7504 IF TRAP FILTER	VTF1180
	F7505 IF TRAP FILTER	VTF1181
	F7501 TRAP FILTER	VTF1183
	L7504 VCO COIL	VTL1164

CAPACITORS

	C7507 (220uF/10V)	ACH1368
	C7552 (3.3uF/50V)	ACH1385
	C7542 (47uF/16V)	ACH1391
	C7509,C7525,C7549,C7591,C7599 (100uF/16V)	ACH1394
	C7501 (10uF/50V)	ACH1402
	C7564,C7573,C7581	CCSRCH102J50
	C7515	CCSRCH120J50
	C7568	CCSRCH121J50
	C7578	CCSRCH181J50
	C7567	CCSRCH470J50
	C7556,C7558	CCSRCH560J50
	C7576	CCSRCH680J50
	C7530	CCSRCH820J50
	C7569,C7570	CCSRCJ3R0C50
	C7537,C7539	CKSQYB225K10
	C7502,C7520,C7522,C7523	CKSRYB102K50
	C7534,C7535,C7579,C7580	CKSRYB102K50
	C7514,C7524,C7528,C7536,C7545	CKSRYB103K50
	C7554,C7572,C7584	CKSRYB103K50
	C7541	CKSRYB104K16
	C7503	CKSRYB105K10
	C7559,C7561,C7588	CKSRYB152K50
	C7590	CKSRYB221K50
	C7504,C7505,C7526	CKSRYB222K50
	C7540	CKSRYB224K10
	C7518	CKSRYB332K50
	C7557,C7560,C7583,C7589	CKSRYB471K50
	C7563,C7571	CKSRYB472K50
	C7582	CKSRYF103Z50
	C7575	CKSRYF104Z16
	C7506,C7510,C7513,C7527,C7531	CKSRYF104Z50
	C7547,C7550,C7551,C7555,C7577	CKSRYF104Z50
	C7511,C7546,C7548,C7553,C7562	DCH1165
	C7587 (10uF/16V)	DCH1165

RESISTORS

	R7568	RD1/2LMF100J
	R7524	RS1/16S2203F
	R7554	RS1/16S2700F

Mark	No.	Description	Part No.
	R7544,R7552		RS1/16S2702F
	R7504		RS1/16S3302F
	R7655,R7656		RS1/16S5600F
	R7555		RS1/16S6800F
	VR7504		CCP1390
	VR7502		CCP1398
	Other Resistors		RS1/16S###J

OTHERS

⚠	3229 GASKET E	ANK1721
	X7501 CERAMIC RESONATOR (18.432MHz)	VSS1189
⚠	U7501 TV FRONT END	AXF1119

[AV I/O BLOCK]

SEMICONDUCTORS

	IC7701	TC74VHC125FT
	Q7406,Q7407,Q7706	2SA1586
	Q7401,Q7402,Q7409,Q7410	2SC4116
	Q7412,Q7413,Q7415,Q7416	2SC4116
	Q7403,Q7757	DTA124EUA
	Q7404	DTC124EUA
	Q7408,Q7411,Q7414	HN1A01FU
	D7710	1SS301
	D7407-D7412,D7416-D7418	1SS302
	D7703	1SS355
	D7401-D7406,D7413-D7415	UDZS9.1B

COILS AND FILTERS

	L7403-L7408	LCTAW1R0J2520
	L7401,L7402	LCTAW560J2520

CAPACITORS

	C7415,C7416 (1.0uF/50V)	ACH1383
	C7429,C7433,C7709	CEAT471M10
	C7402,C7403,C7405,C7407,C7408	CKSRYB103K50
	C7410,C7417,C7424,C7443-C7445	CKSRYB103K50
	C7460	CKSRYB103K50
	C7401,C7406,C7411-C7414,C7426	CKSRYB105K10
	C7428,C7437,C7438,C7440,C7442	CKSRYB105K10
	C7446-C7448	CKSRYB105K10
	C7425,C7427	CKSRYB222K50
	C7404,C7409,C7441	CKSRYB473K16
	C7431,C7435,C7439,C7449-C7453	CKSRYF104Z50
	C7739,C7765	CKSRYF104Z50
	C7418-C7423,C7430,C7432,C7434	DCH1165
	C7436 (10uF/16V)	DCH1165

RESISTORS

	R7431,R7432,R7443,R7444	RS1/10S151J
	R7455,R7456	RS1/10S151J
	Other Resistors	RS1/16S###J

OTHERS

	JA7401,JA7403 6P PIN JACK	AKB1295
	JA7402 6P PIN JACK	AKB1297
	JA7404,JA7405 2P 4PIN MINIDIN(S)	AKP1234

[AV SW BLOCK]

SEMICONDUCTORS

	IC8005	AN15852A
	IC8002	CXA2069Q
	IC8004	NJM12904V
	IC8003	TC4052BFT
	IC8001	TC7WH123FU
	Q8005,Q8006	2SA1586
	Q8021,Q8022,Q8025-Q8027	2SC4116
	Q8023	DTA124EUA
	Q8024	DTC124EUA
	Q8011	HN1C01FU
	D8015-D8017	1SS355
	D8013,D8014	UDZS9.1B

CAPACITORS

	C8005,C8006,C8056 (100uF/16V)	ACH1394
	C8014 (22uF/16V)	ACH1400
	C8022,C8027	CCSRCH181J50
	C8057	CCSRCH270J50
	C8019,C8038	CCSRCH681J50
	C8002-C8004,C8008,C8009,C8016	CKSRYB105K10
	C8050	CKSRYB105K10
	C8001,C8013,C8015,C8025,C8026	CKSRYF104Z50
	C8031-C8036,C8039,C8042-C8044	CKSRYF104Z50
	C8048,C8049,C8052,C8053,C8055	CKSRYF104Z50
	C8059	CKSRYF104Z50
	C8010,C8012,C8018,C8023,C8024	DCH1165
	C8028,C8037,C8040,C8041,C8051	DCH1165
	C8060,C8061 (10uF/16V)	DCH1165

RESISTORS

	Other Resistors	RS1/16S###J

[AV REG BLOCK]

SEMICONDUCTORS

	IC8505,IC8506	PQ05DZ11
	IC8504	PQ09DZ11
	Q8509,Q8514	RN1303
	Q8512	RN2303
	Q8510	SM6K2
	Q8511	TPC8003
	D8509-D8511	1SS355

COILS AND FILTERS

	F8501-F8504,F8506,F8508,F8510	ATF119
	EMI FILTER	

CAPACITORS

	C8517,C8523 (100uF/6.3V)	ACH1364
	C8510,C8515,C8521 (22uF/16V)	ACH1370
	C8512 (100uF/25V)	ACH1374
	C8511,C8513,C8516,C8518,C8522	CKSRYB103K50
	C8524,C8530	CKSRYB103K50

RESISTORS

	R8528,R8531	RS1LMF1R0J
	R8525	RS1LMF3R3J
	Other Resistors	RS1/16S###J

OTHERS

	CN8503,CN8504 PLUG 14-P	AKM1237

[BOARD IF BLOCK]

CAPACITORS

	C8653-C8655 (10uF/16V)	DCH1165

RESISTORS

Mark No.	Description	Part No.
	Other Resistors	RS1/16S###J
	OTHERS	
	CN8652-CN8654 50P CONNECTOR	AKM1201
	CN8658 12P FFC CONNECTOR	AKM1233
	[IF UCOM BLOCK]	
	SEMICONDUCTORS	
	IC8705	24LC01B
	IC8702	HD64F3687FP
	IC8703	PST9231N
	IC8701	TC74VHC08FT
	IC8704	TC7W126FU
	Q8701	2SJ461A
	Q8702	RN1303
	Q8708	RN2303
	CAPACITORS	
	C8711 (100uF/16V)	ACH1394
	C8706,C8707	CCSRCH120J50
	C8709	CKSRYB472K50
	C8701-C8705,C8708,C8712,C8713	CKSRYF104Z50
	C8716 (10uF/16V)	DCH1165
	RESISTORS	
	R8719	RAB4C101J
	R8702,R8704,R8720,R8745	RAB4C103J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN8701 PLUG 8-P	AKM1225
	X8702 CERAMIC RESONATOR	ASS1168
	X8701 CRYSTAL OSCILLATOR (32.768kHz)	ASS1172
	[TELETEXT BLOCK]	
	SEMICONDUCTORS	
	IC8903	NJM2233BM
	IC8901	PST9230N
	IC8904	SDA6000
	IC8906	TA1287FG
	IC8905	TC74VHC08FT
	IC8907	TC7SH04FU
	IC8902	TC7W126FU
	Q8901,Q8904-Q8906	2SA1586
	Q8903,Q8909	2SC4116
	Q8902,Q8910	RN1303
	D8902	UDZS3.0B
	D8901	UDZS3.9B
	COILS AND FILTERS	
	L8901	LCTAW270J2520
	CAPACITORS	
	C8906 (100uF/16V)	ACH1394
	C8916,C8917	CCSRCH150J50
	C8908	CCSRCH181J50
	C8901	CCSRCH471J50
	C8904	CKSRYB102K50
	C8903	CKSRYB103K50
	C8926,C8936-C8938,C8940-C8942	CKSRYB104K16
	C8902,C8905,C8909-C8911	CKSRYF104Z50
	C8914,C8915,C8918-C8920	CKSRYF104Z50
	C8923-C8925,C8927-C8929	CKSRYF104Z50
	C8933-C8935,C8939	CKSRYF104Z50
	C8907,C8912,C8913 (10uF/16V)	DCH1165
	RESISTORS	
	R8905-R8907,R8922,R8960,R8991	RAB4C101J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN8901 PLUG 8-P	AKM1225
	K8904,K8905 TEST PIN	AKX9002
	X8901 CRYSTAL OSCILLATOR	ASS1180
	[MEMORY SW BLOCK]	
	SEMICONDUCTORS	
	IC9104	HY57V641620HGT-H
	IC9101	MBM29LV160TE-90PFTN
	CAPACITORS	
	C9101,C9107,C9108,C9113,C9114	CKSRYF104Z50
	C9119,C9120,C9129	CKSRYF104Z50
	RESISTORS	
	Other Resistors	RS1/16S###J
	C MDR ASSY	
	SEMICONDUCTORS	
	IC9301,IC9302	TC74VHC08FT
	Q9301,Q9302	2SC4116
	Q9303	DTA124EUA
	CAPACITORS	
	C9304	CCSRCH101J50
	C9301,C9305-C9308	CCSRCH471J50
	C9302,C9303	CKSRYF104Z50
	RESISTORS	
	Other Resistors	RS1/16S###J
	OTHERS	
	CN9301 SOCKET (20P)	AKP1226
	CN9302 CONNECTOR	CKS3830
	D SR ASSY	
	SEMICONDUCTORS	
	IC9451	SP3232ECY
	IC9453	TC74VHC00FT
	IC9452	TC74VHC125FT
	Q9455,Q9458	2SA1586
	Q9453	2SC4116
	Q9454,Q9456,Q9457	DTC124EUA
	D9451,D9452,D9459,D9460	1SS355
	CAPACITORS	
	C9456,C9457 (10uF/16V)	ACH1399
	C9451-C9455,C9459,C9460	CKSRYF104Z16
	RESISTORS	
	Other Resistors	RS1/16S###J
	OTHERS	
	JA9453 MINI JACK(4P)	AKN1073
	JA9451 9P D-SUB SOCKET	AKP1240

Mark No.	Description	Part No.
	CN9452 CONNECTOR	CKS3826
	JA9452 REMOCON JACK	RKN1004

E FRONT ASSY

SEMICONDUCTORS

	IC9501	24LCS21A
	IC9602	MM1522XU
	IC9601	NJM12904V
	IC9502	TC74VHC08FT
	Q9501,Q9502	DTC124EUA
	D9503	1SS301
	D9506-D9508	1SS302
	D9501,D9502,D9504,D9505	UDZS5R6(B)
	D9509-D9511	UDZS9R1(B)

COILS AND FILTERS

	L9503-L9506	LCTAW1R0J2520

CAPACITORS

	C9520-C9522 (10uF/35V)	ACH1376
	C9605 (47uF/16V)	ACH1391
	C9517,C9518	CCSRCH220J50
	C9505,C9506,C9531-C9533	CKSRYB103K50
	C9504,C9514	CKSRYB104K16
	C9507-C9512	CKSRYB105K10
	C9503	CKSRYB473K16
	C9516,C9519,C9602,C9606	CKSRYF104Z16
	C9513,C9515,C9523 (10uF/16V)	DCH1165

RESISTORS

	R9602,R9605	RS1/16S1001F
	R9504,R9507,R9508,R9534-R9536	RS1/16S75R0F
	Other Resistors	RS1/16S###J

OTHERS

	JA9501 PIN JACK(3P)	AKB1303
	CN9502 50P CONNECTOR	AKM1201
	JA9502 4P MINIDIN SOCKET(S)	AKP1238
	JA9505 15P D-SUB SOCKET	AKP1241
	JA9503 REMOCON JACK	RKN1026

F LED ASSY

SEMICONDUCTORS

	Q9652	RN2902
	D9654	SML-310MT
	D9653	SML-311UT

CAPACITORS

	C9651	CKSRYB103K50

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	CN9651 7P CONNECTOR	AKM1293

G REG ASSY

SEMICONDUCTORS

	IC8509	BD6522F
	IC8501,IC8503	M5291FP
	IC8508	PQ025EZ01ZP
	IC8507	PQ033EZ01ZP
	Q8507	2SC4116
	Q8504,Q8508	HN1C01FU
	Q8515	RN1303
	Q8503	RN2303
	Q8516	TPC8003
	D8501,D8504,D8506,D8508	1SS355
	D8512,D8513	1SS355
	D8507	HZU2.2B
	D8502	UDZS5.1B

COILS AND FILTERS

	F8511 EMI FILTER	ATF1194
	L8501,L8502 INDUCTOR	ATH1126

CAPACITORS

	C8501,C8503,C8528,C8533 (100uF/6.3V)	ACH1364
	C8507,C8526,C8531 (22uF/16V)	ACH1370
	C8536 (47uF/16V)	ACH1371
	C8504,C8519	CCSRCH221J50
	C8520	CEAT101M50
	C8543,C8545	CEHAZL471M16
	C8527,C8529,C8532,C8534,C8540	CKSRYB103K50
	C8542,C8546,C8547	CKSRYB103K50
	C8502,C8514	CKSRYB821K50
	C8506,C8508,C8525	CKSRYF104Z16
	C8505,C8539,C8541,C8544	DCH1165

RESISTORS

	R8502,R8508	ACN1164
	R8506,R8510,R8511,R8522,R8530	ACN1188
	R8533-R8535	ACN1188
	R8503	RS1/16S1001F
	R8509	RS1/16S1101F
	R8504	RS1/16S3301F
	R8520	RS1/16S3302F
	R8543,R8545	RS1LMF1R0J
	Other Resistors	RS1/16S###J

OTHERS

	CN8505,CN8506 SOCKET 14-P	AKP1247
	CN8651 PLUG(15P)	KM200NA15
	U8502 DD CON UNIT	AXY1066

H AC SW ASSY

SWITCHES AND RELAYS

⚠	S9341	ASG1093

OTHERS

	CN9341 2P-SIDE VA-CONNECTOR	S2P3-VH

I POWER SUPPLY UNIT

POWER SUPPLY UNIT has no service part.

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 HOW TO ENTER SERVICE FACTORY MODE

■ Refer to the technical document (Service Know-How).

6.2 POSSIBLE CASES WHERE READJUSTMENT IS REQUIRED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
AV BOARD Assy	➡	No adjustment required
MR MAIN BOARD Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required

■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
AV BOARD Assy	➡	If the front end is replaced, adjustment is required.
MR MAIN BOARD Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
Other assemblies	➡	No adjustment required

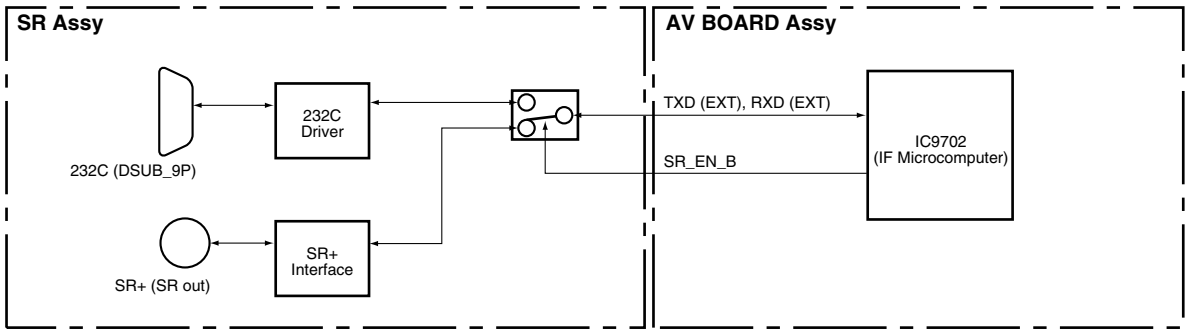
■ Adjustment items

① AFC Adjustment
② RF-AGC Adjustment
③ Video Level Adjustment

6.3 USING RS-232C COMMANDS

For the PDP-434HD and -504HD series Plasma Displays, the circuitry is structured as shown in the diagram below to support the SR+ system. Controlling with either the SR+ system or RS-232C commands can be selected. As the SR+ system is selected at shipment, to control with RS-232C commands in servicing it is necessary to switch the paths. After servicing, be sure to return the setting to the SR+ system.

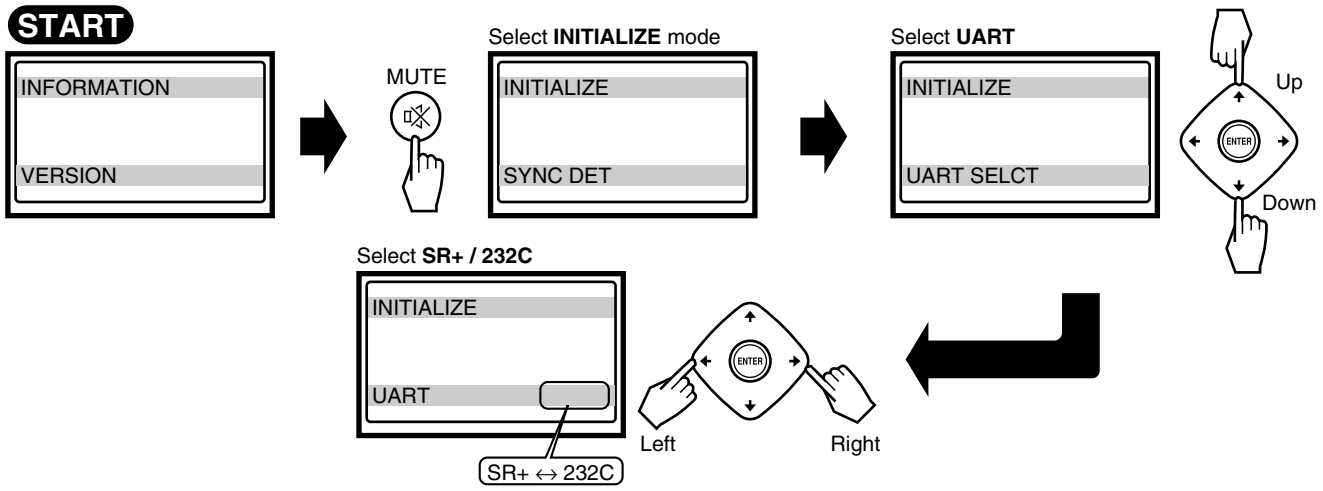
● Rough diagram of switching between SR+ and RS-232C



● How to switch from SR+ to RS-232C

Remote control unit SR+ → 232C / 232C → SR+

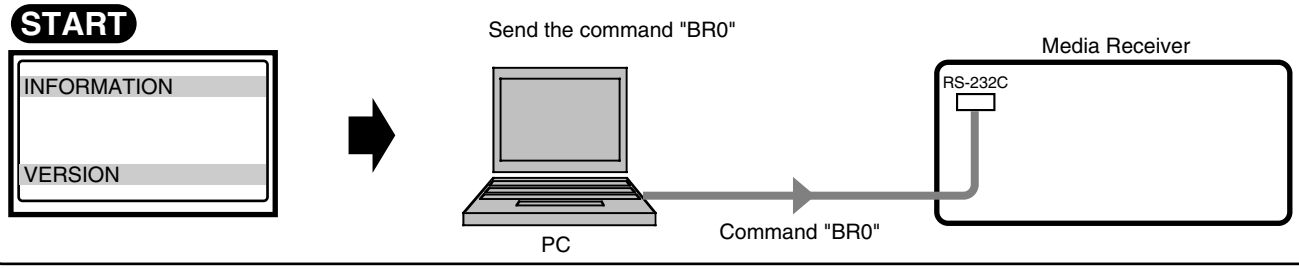
Enter the Service Factory mode



Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Hold the **VOLUME** ◿+ or ◿– key on the remote control unit pressed for 3-10 seconds during Standby mode.
Then within 3 seconds after the key is released, hold the **2-screen** ◑ key on the remote control unit pressed for 3-10 seconds.
Then within 3 seconds after the key is released, use the **SET** key on the remote control unit to set to RS-232C (the baud rate last selected is chosen) or the **HOME MENU** key to set to SR+.

PC 232C → SR+ only

Enter the Service Factory mode
(See "6.7 SERVICE FACTORY MODE".)

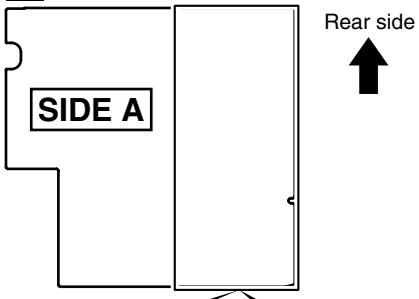


6.4 ADJUSTMENT ITEMS

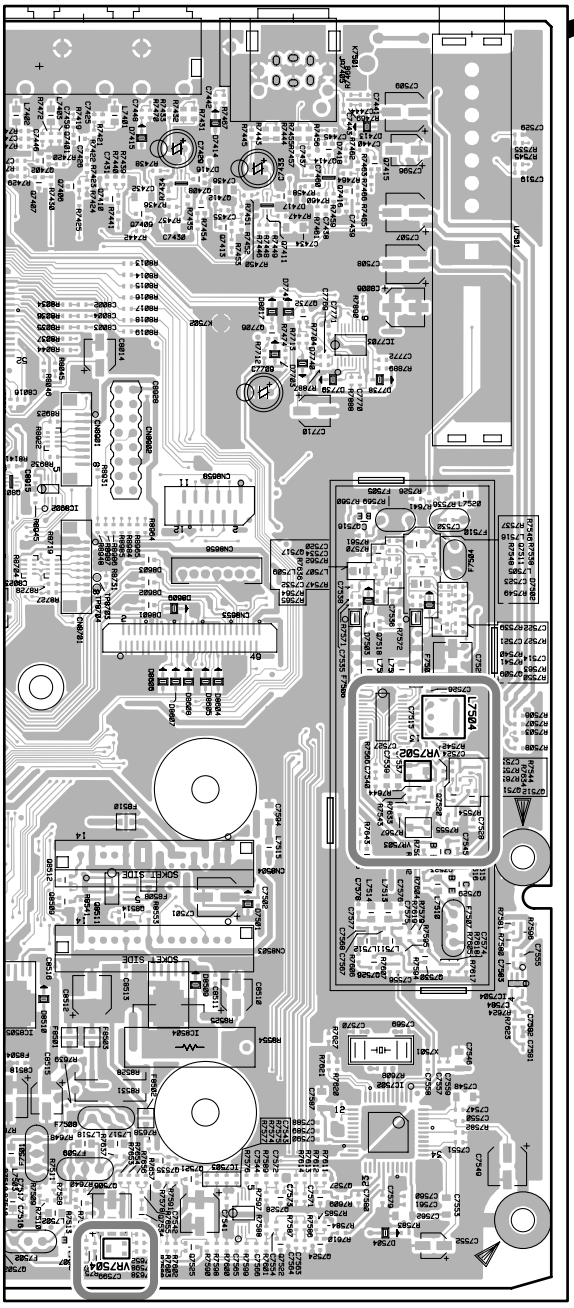
If readjustment is necessary because of adjustment error at shipment, perform adjustments as shown below.

● **Adjustment Points**

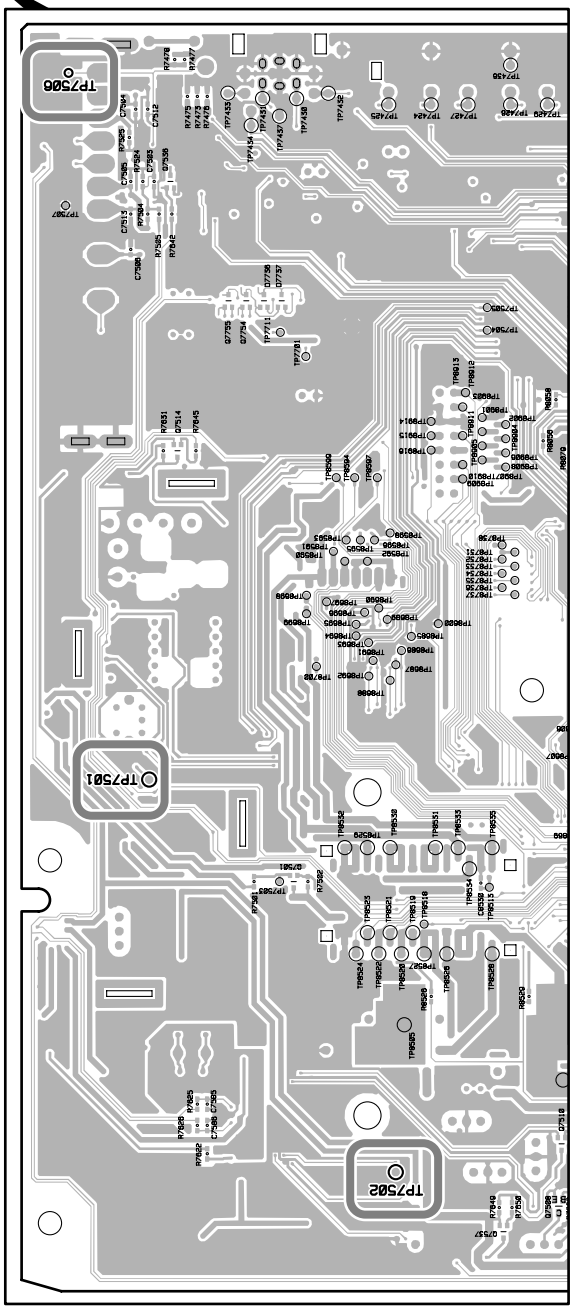
B AV BOARD ASSY



SIDE A

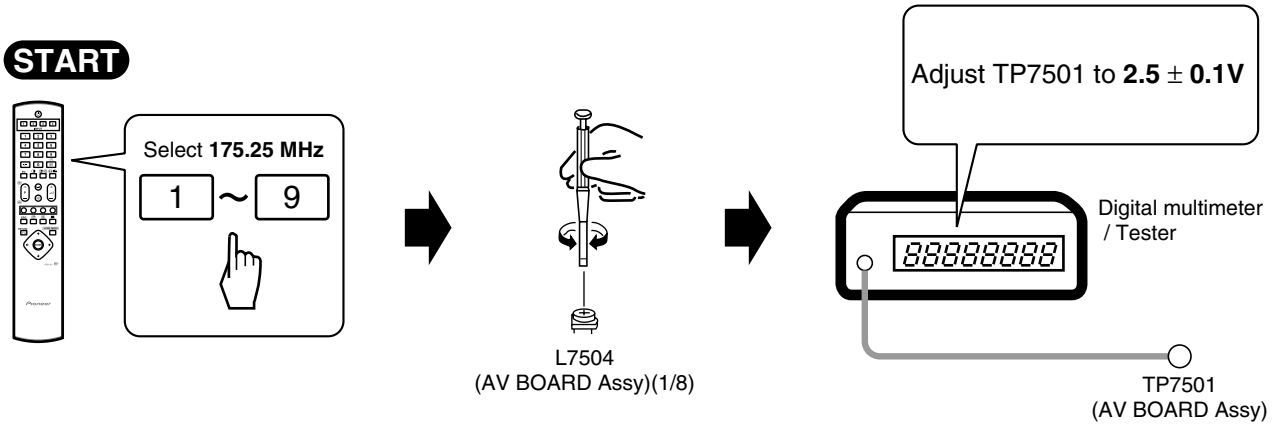


SIDE B



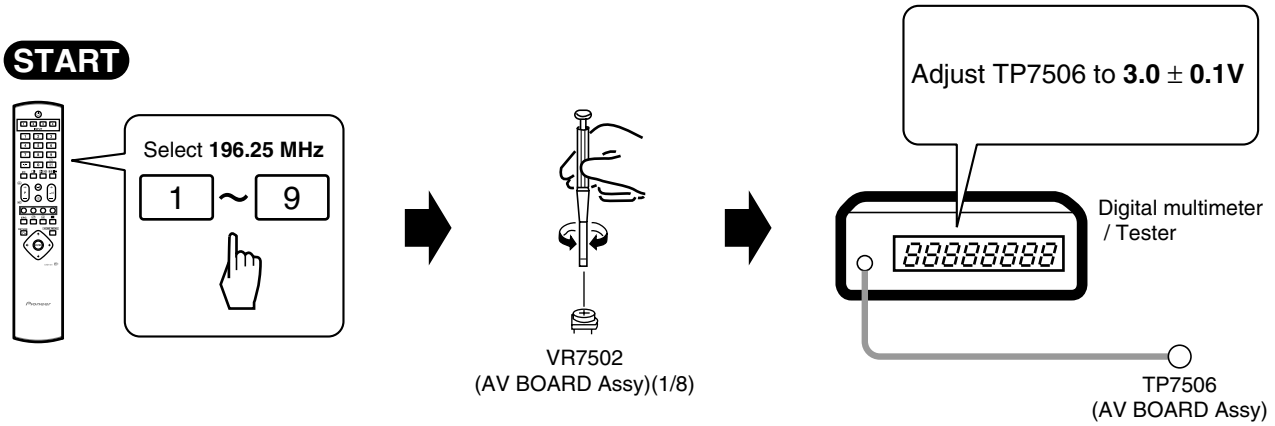
① AFC Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 75dBμV
PAL-B/G
White bar 100%



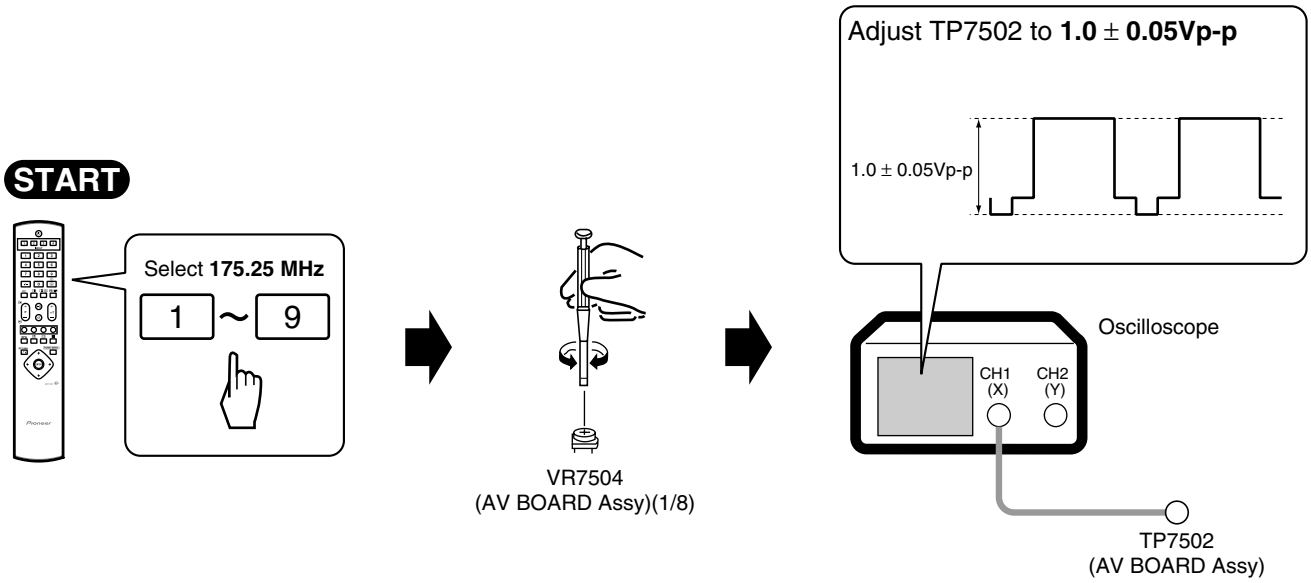
② RF-AGC Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 66dBμV
PAL-B/G
Multiburst



③ Video Level Adjustment

Equipment : SG
Condition : Input RF level 75dBμV
PAL-B/G
White bar 100%



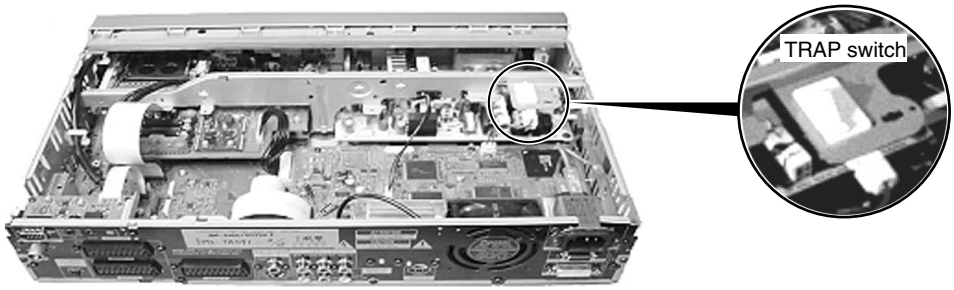
6.5 TRAP SWITCH

● Outline and Notes

A For video data transmission from the Media Receiver to the PDP-434HD and PDP-504HD-series Plasma Displays, digital signals are used. Therefore, this unit adopts the HDCP (High-bandwidth Digital Content Protection) system for copyright protection. This unit is also provided with a detection switch (TRAP switch) that will prohibit the unit from being turned on again "if the upper plate of the unit is accidentally opened," in order to prevent the panel technology from being leaked out.

The TRAP switch is disabled while the unit is turned off.
When performing internal diagnosis of the PDP, fix the switch to the OFF position using adhesive tape before turning on the unit. After servicing, be sure to remove the adhesive tape.

B



● Rear view

C

D

E

F

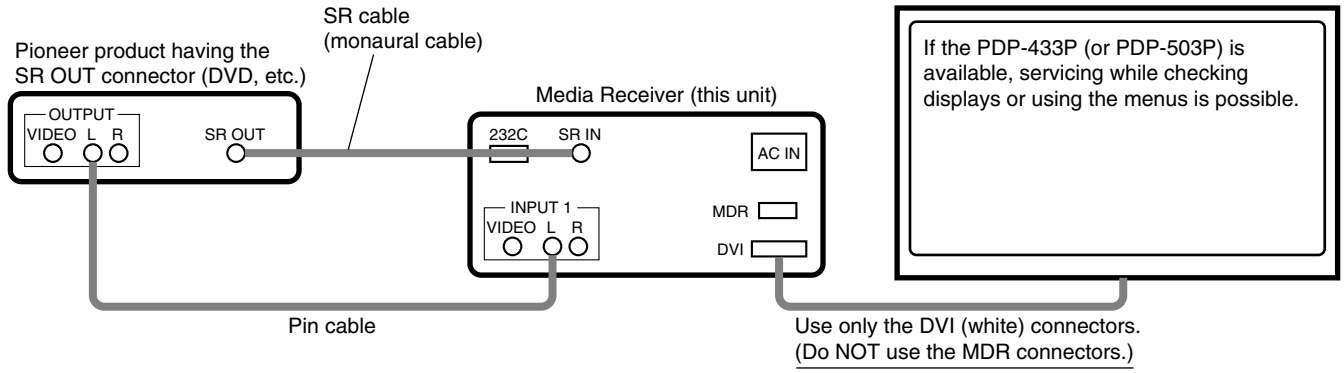
6.6 SERVICING USING ONLY THE MEDIA RECEIVER

For servicing of the PDP-434HD and PDP-504HD-series Plasma Display using only the Media Receiver, the following two methods can be used:

● Remote controlling using SR connections

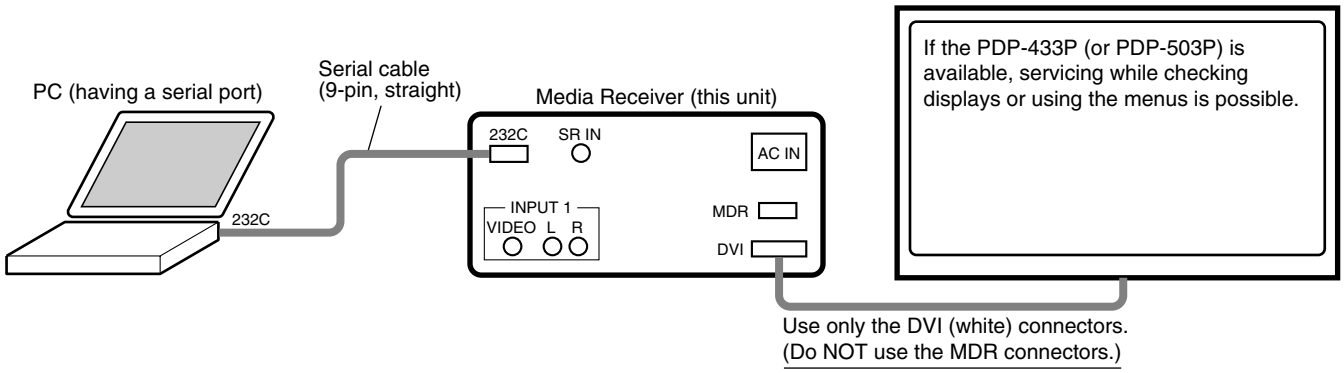
About connections

- Connect the SR OUT connector of a Pioneer product having that connector (a DVD in the following example) and the SR IN connector of the Media Receiver, using the SR cable. As the remote control sensor is not provided with the Media Receiver, this connection is required for using the remote control unit if the panel is not available. In this case, aim the remote control unit at the remote control sensor of the device (DVD in this case).
- Connect either the audio or the video output of the device (DVD in the example) and the corresponding audio or video input of the Media Receiver, using a cable with phono plugs. This connection is required in order to use ground in common with the SR cable, because with the SR cable connection the ground connection for signal reference is not available. In the example, the audio L channel is used, but the audio R channel or video can be used instead.
- If the plasma display for a previous model, such as the PDP-433P or PDP-503P, is available, servicing while checking displays or using the menus is possible. For this, connect only the DVI connectors (white) of the Media Receiver and the plasma display. The MDR connector of the Media Receiver must not be used, even though it has the same shape and number of pins, because signals assigned to the connectors differ. Using the MDR connector may damage the unit.



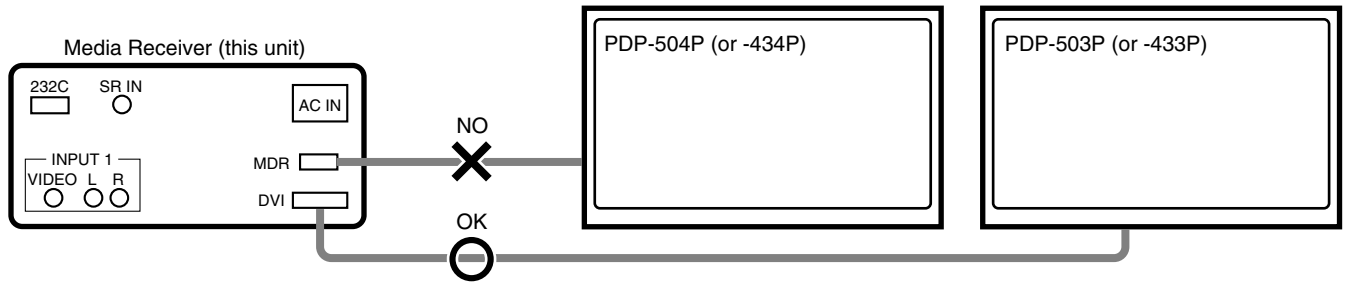
● RS-232C control using a PC

As the SR+ system is selected at shipment, to use RS-232C control, RS-232C must be selected beforehand using the remote control unit and by making the above connections. For details, see "6.3. USING RS-232C COMMANDS."
For connection with the PC, use a straight cable.



● Note on connection

If the MDR connector of the PDP-434HD or -504HD-series is used, it is considered that the PDP-434P (or -504P) is connected, and the Media Receiver operates on such precondition, **which may result in a failure of the Media Receiver. Be sure not to connect to the MDR connector.** (Do NOT use the MDR connector when servicing the Media Receiver alone.)



6.7 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

Operation in Service Factory mode

● Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- Two-screen operations (input function set on the main side is selected)
- P ZOOM
- STILL
- Detection of the TRAP switch (The log in the EEPROM is retained.)

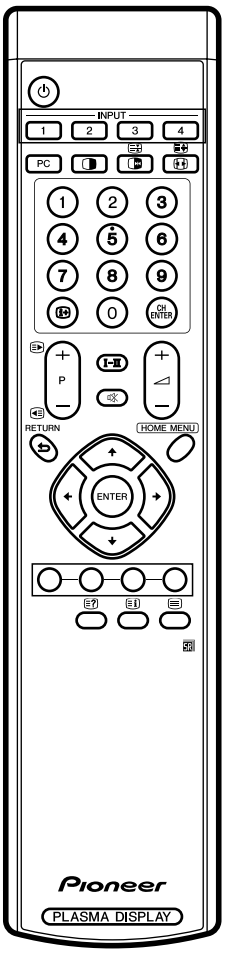
● User data

User data will be treated as follows:

- User data on picture- and audio-quality adjustments are not reflected (data stored in memory will be retained).
- Data on screen position are reset to the default values (data stored in memory will be retained).

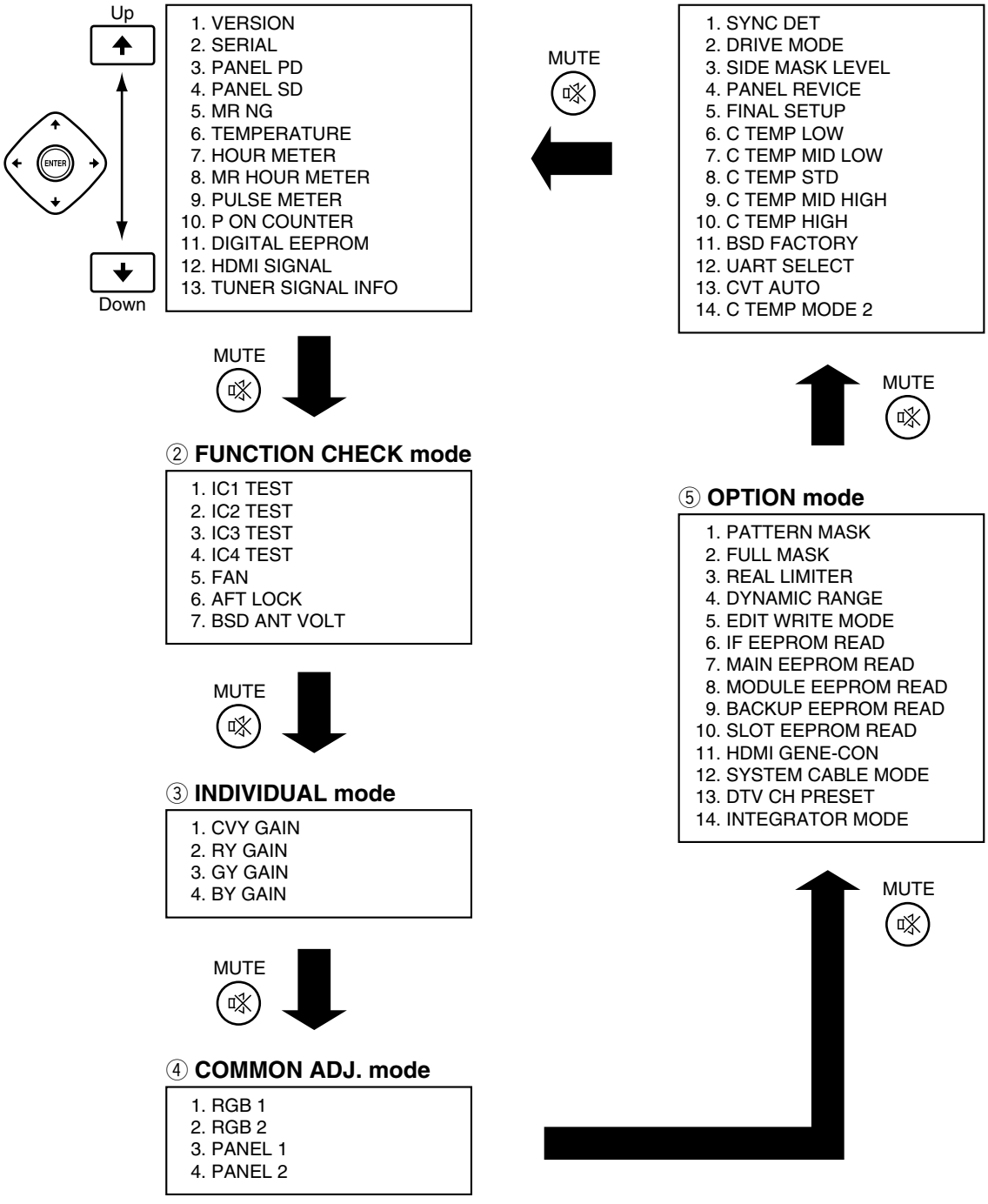
Remote control codes in Service Factory mode

SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
LEFT	Increasing the adjustment value	Increasing the adjustment value
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
BS numeric keys	Function: BS	Function: BS (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on

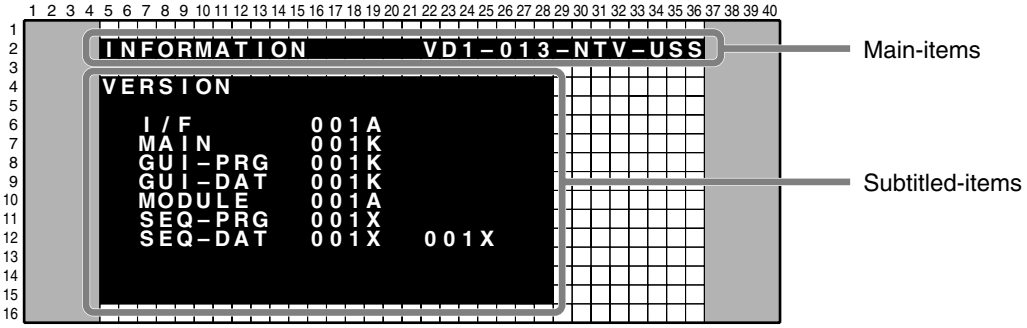


AXD1492

Changes of the Service Factory menus

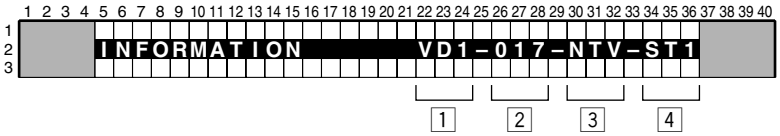


Indications in Service Factory mode



Main-item indications

Four parameters are displayed:



1 Input function

Input Functions	On-Screen Display
INPUT 1	VD1
Terrestrial wave	AIR
CS-DIGITAL	CSD
BS-DIGITAL	BSD

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

Color System and Signal Type		On-Screen Display
NTSC	Composite input/ S-connector input	NTV
BLACK/WHITE		BWV
Y / CB / CR		CBR
Y / PB / PR		PBR
RGB		RGB
Digital video signal		DIG

4 Option (Destination, etc.)

Options	On-Screen Display
HD system in Europe	EHS

● SIG-Mode Table

The signal mode is displayed in three characters:
First character: Resolution of the input signal (numerics for the video signals, and alphabetics for the PC signals)
Second character: Grouping of the V frequencies

SIG-Mode table for video signals (resolutions and V frequencies)

SIG-Mode	Signal Type	Vertical Frequency fv (Hz)	Horizontal Frequency fh (kHz)
13*	SDTV • 525i	60.000	15.750
21*	SDTV • 625i	50.000	15.625
33*	SDTV • 525p	60.000	31.500
41*	HDTV • 1125i	50.000	28.125
43*		60.000	33.750
51*	SDTV • 625p	50.000	31.250
61*	HDTV • 750p	50.000	37.500
63*		60.000	45.000

SIG-Mode table for PC signals (resolutions and V frequencies)

SIG-Mode	Signal Type	Vertical Frequency fv (Hz)	Horizontal Frequency fh (kHz)
A2*	720 × 400	56.000	24.825
A5*		70.087	31.469
A8*		85.050	37.861
B3*	640 × 480	59.940	31.469
B4*		66.666	35.000
B6*		72.809	37.861
B7*		75.000	37.500
B8*		85.000	43.300
C3*	852 × 480	60.000	31.680
D2*	800 × 600	56.250	35.1556
D3*		60.317	37.879
D6*		72.188	48.077
D7*		75.000	46.875
D8*		85.061	53.674
E7*	832 × 624	74.550	49.725
F3*	1024 × 768	60.004	48.363
F5*		70.069	56.476
F7*		75.029	60.023
F8*		84.997	68.677
G2*	1280 × 768	56.250	45.113
G3*		59.833	47.986
G5*		70.000	56.137

2nd Character	Reference V Frequency	Remarks
–	–	No signal
1	50	
2	56	
3	60	
4	66	
5	70	
6	For interpolation of 72-Hz area	For distinguishing between 70-Hz or 75-Hz area
7	75	
8	85	
9 (spare)	–	
?	–	Out of range

Third character: Selection of the screen size by the user is displayed.
(○: available, ×: not available)

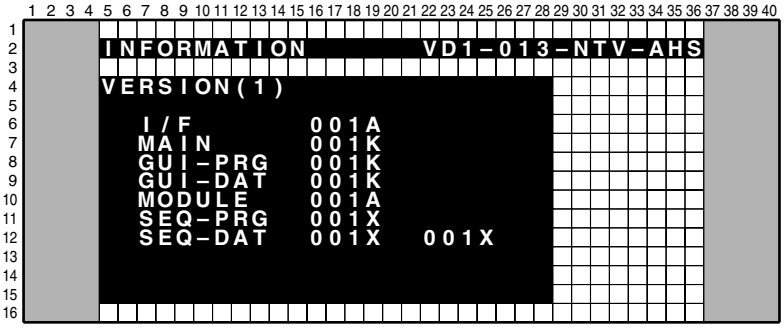
3rd Character	Description on GUI	VIDEO	PC	Remarks
0	DOT BY DOT	×	○	
1	4 : 3	○	○	
2	FULL (FULL1)	○	○	
3	ZOOM	○	×	
4	CINEMA	○	×	
5	WIDE	○	×	
6	FULL 14 : 9	○	×	
7	CINEMA 14 : 9	○	×	
8	FULL2	○	○	HDTV1035i
9	OVERSCAN	○	×	

① INFORMATION mode

● Operation items

No.	Function / Display	Content
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)
3	SERIAL	For displaying the serial number of the product (not used)
4	PANEL PD	Power-down generated on the panel side and its time of occurrence are displayed.
5	PANEL SD	Shutdown generated on the panel side and its time of occurrence are displayed.
6	MR NG	Power-down and/or shutdown generated on the Media Receiver side and their/its time of occurrence are displayed.
7	TEMPERATURE	Information on temperature is displayed.
8	HOUR METER	Cumulative power-on time to the panel is displayed.
9	MR HOUR METER	Cumulative power-on time to the Media Receiver is displayed.
10	PULSE METER	The pulse meter value on the panel side is displayed.
11	P ON COUNTER	The number of times the power to the panel was turned on is displayed.
12	DIGITAL EEPROM	The status of the backup data for the module microcomputer is displayed.
13	HDMI SIGNAL INFO.	The file information of HDMI series are displayed.
14	TUNER SIGNAL INFO.	The radio-wave conditions input to the GCR and IC 1 are displayed.

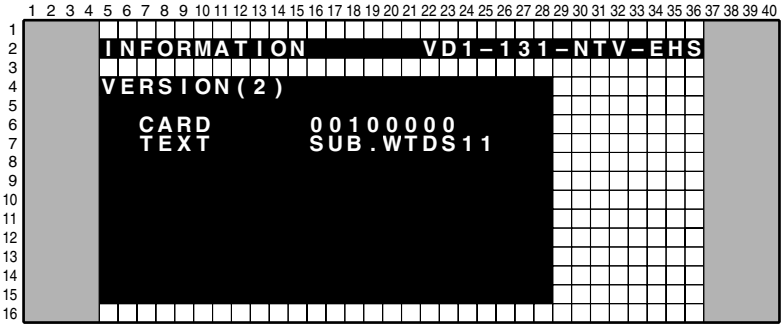
1. VERSION (1)



The flash memory versions for each device are displayed.

Flash memory of Device	On-Screen Display
User IF microcomputer (MR: IC8702)	I / F
Main microcomputer (MR: IC7207)	MAIN
Program for IC 3 (MR: IC7101)	GUI–PRG
GUI data for IC 3 (MR: IC7101)	GUI–DAT
Module microcomputer (for the PDP)	MODULE
Program for IC 4 (for the PDP)	SEQ–PRG
Sequence data for IC 4 (for the PDP)	SEQ–DAT

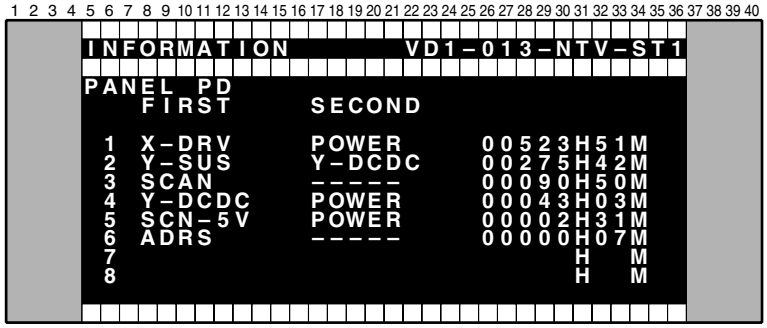
2. VERSION (2)



European HD

Device	Name Display	Version Display	Remarks
PC-CARD	CARD	8 character	
TELTEXT	TEXT	60 character	

4. PANEL PD

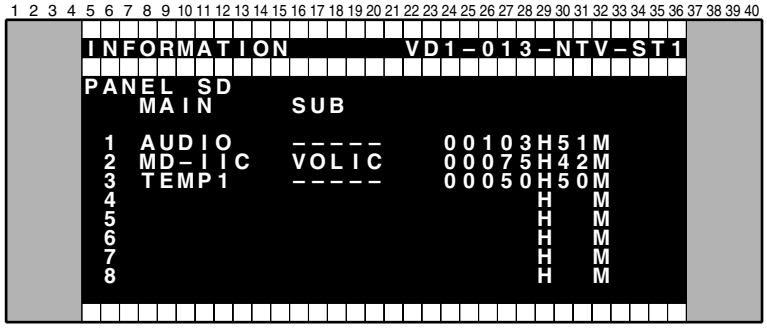


Power-down information only on the panel side is displayed.

• Panel power-down information

No.	Type of Power-down	On-Screen Display	No.	Type of Power-down	On-Screen Display
1	No corresponding item	- - - - -	7	Power-down of the Y-SUS system	Y-SUS
2	Power-down of the main power supply system	POWER	8	Power-down of the address system	ADRS
3	Power-down of the scanning system	SCAN	9	Power-down of the X-DRIVE circuitry	X-DRV
4	Power-down in the path between the scanning system and 5-V power supply	SCN-5V	A	Power-down of the X-DC/DC converter	X-DCDC
5	Power-down of the Y-Drive system	Y-DRV	B	Power-down of the X-SUS system	X-SUS
6	Power-down of the Y-DC/DC converter	Y-DCDC	C	Power-down of the driving IC power supply system	D-DCDC

5. PANEL SD

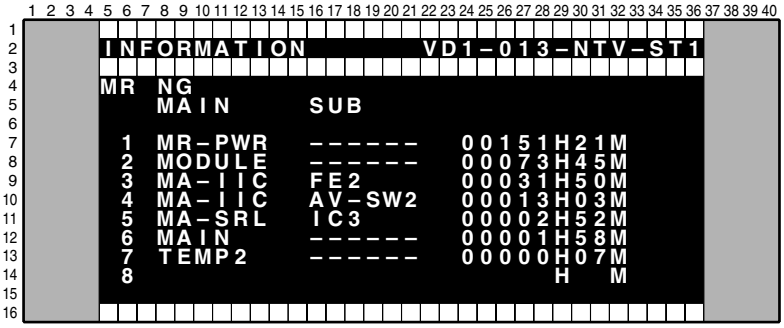


The shutdown log only on the panel side is displayed.

• Panel shutdown information

No.	Type of Shutdown	On-Screen Display (MAIN)	Remarks
1	Abnormality in IC 4 communication	IC4	
2	Abnormality in module microcomputer IIC communication	MD-IIC	Subcategories exist. (EEPROM4K : IC5206, EROM2K : IC402, VOLIC : IC3502)
3	Moisture-condensation detection	DEW	
4	Abnormality in panel temperature	TEMP1	
5	Short-circuiting of the speakers	AUDIO	
6	Abnormality in module microcomputer communication	MODULE	

6. MR NG



Information on power-down and shutdown of the Media Receiver side is displayed.

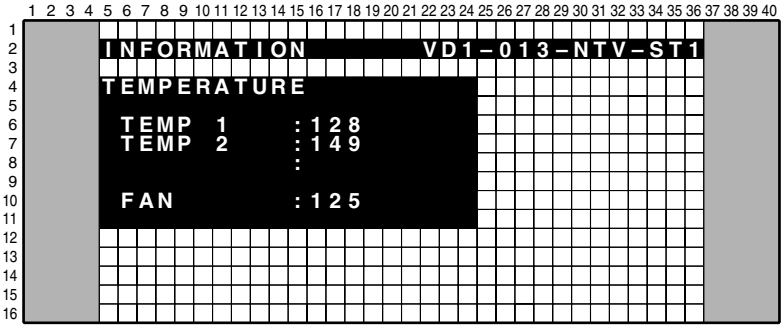
• Media Receiver NG information

No.	Type of Failure	On-Screen Display (MAIN)	Remarks
1	Power-down of the MR power supply	MR-PWR	
2	Abnormality in module microcomputer communication	MODULE	
3	Abnormality in 3-wire serial communication of the main microcomputer	MA-SRL	Subcategories exist.
4	Abnormality in main microcomputer IIC communication	MA-IIC	Subcategories exist.
5	Abnormality in main microcomputer communication	MAIN	
6	Abnormality in temperature of the Media Receiver	TEMP2	
7	Fan stopped.	FAN	
8	Abnormality in communication of the digital tuner	BS-D	Subcategories exist.
9	Abnormality in the ASIC power supply on the MR side	M-DCDC	

• Subcategory information

Type of Shutdown	Subcategory	Remarks
MA-SRL	IF microcomputer (IC8702), IC2 (IC7004), IC3 (IC7101)	
MA-IIC	MA-EEP (IC7205), IC1-M (IC6107), IC1-S (IC6255), HDMI1 (IC6801), HDMI2 (IC6881)*2, AD-M (IC6402), AD-S (IC6602), IC6 (IC6951), CCD (IC8903)*2, FE1 (U7501), FE2 (U7502)*2, AV-SW1 (IC8002), AV-SW2 (IC8005), TX-COM (IC8904)*3, MPX (IC7502)*3	*2 : U.S. model only *3 : Europe model and General area model
BS-D or DTV (Japan or U.S. only)	PS/RST	No power, or reset status continued
	RETRY	The signal 0x02 (ready) has not been received.
	DEVICE	Abnormality in BSD status
CARD	COMM	
	DEVICE	
	RESET	

7. TEMPERATURE

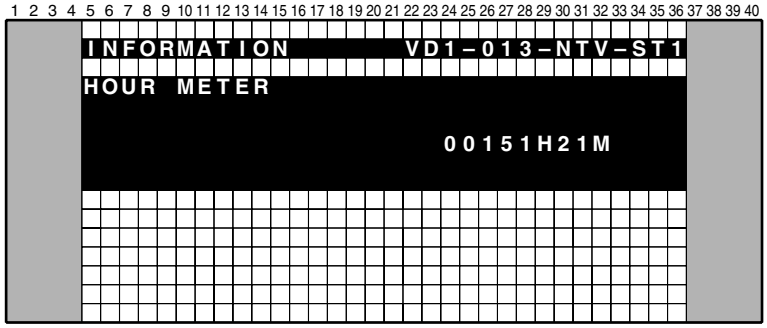


TEMP1: The value read from the temperature sensor built into the panel is displayed in the range of 000-255.
Note: Refer to the service manual of the panel.

TEMP2: The value read from the temperature sensor built into the Media Receiver is displayed in the range of 000-255. For reference, the approximate value for 60°C is 169 and for 35°C is 131.

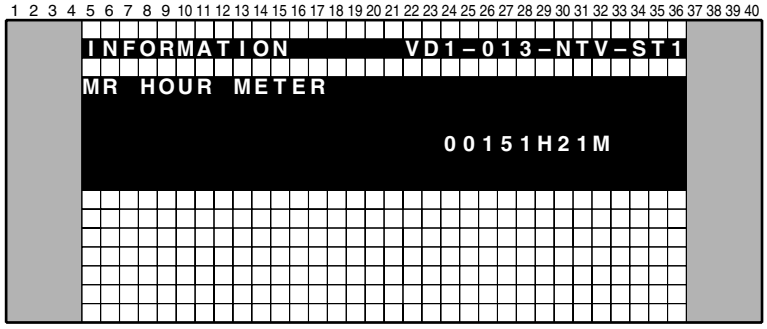
FAN: The value of the Fan output is displayed. At shipment, the output is controlled in 2 steps, and the value for strong output is set to about 131, and the value for weak output is set to about 93.

8. HOUR METER



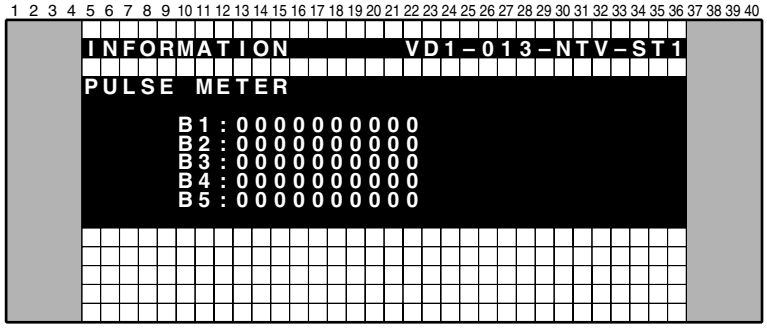
The cumulative power-on time of the panel is displayed.

9. MR HOUR METER



The cumulative power-on time of the Media Receiver is displayed.

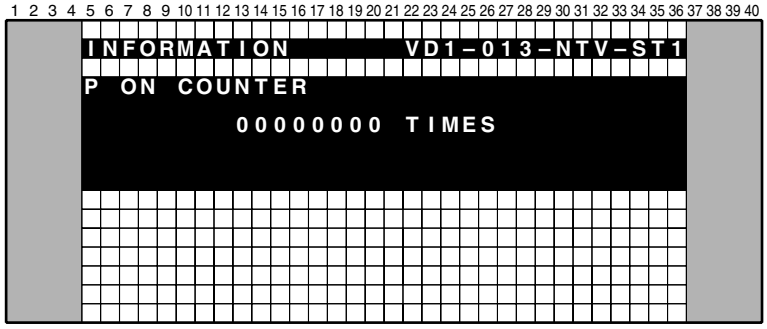
10. PULSE METER



The cumulative number of pulses of the panel is displayed.

Note : Dividing screen into sixteen times sixteen and counting five different locations on a screen. Each item, it's counted total 3840 pixels (for 50 inch) or 3072 pixels (for 43 inch) discharging. (1280/16 x 768/16 = 3840, 1024/16 x 768/16 = 3072)
The first digit numbr is 1M pulses.

11. P ON COUNTER

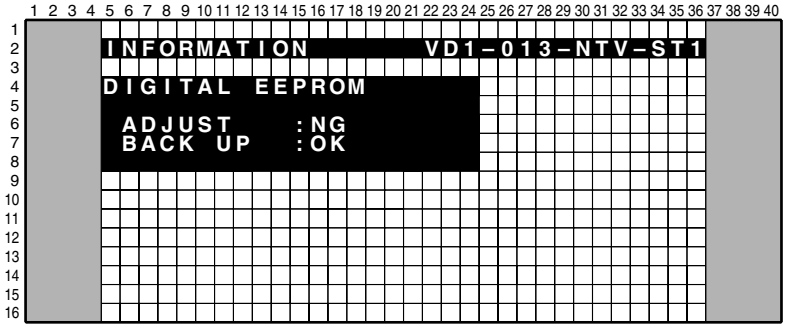


The cumulative number of times the panel was turned on is displayed.

12. DIGITAL EEPROM

When the DIGITAL Assy of the PDP is to be replaced, the adjustment values in it can be temporarily stored in the ROM then be written on the new Assy after replacement. (This function is not supported for initially produced products. It is planned for this function to be supported as soon as it becomes possible.)

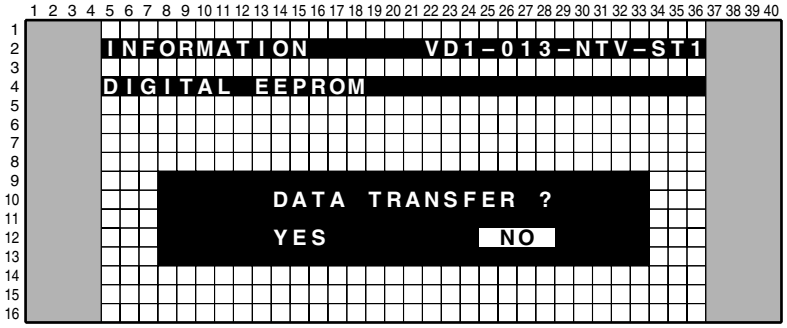
Whether adjustment has been made on the DIGITAL Assy of the PDP or not (i.e., in the state of a new service part), and whether the data on any adjustment values are retained in the backup ROM or not are displayed.



• Downloading the data from the backup ROM

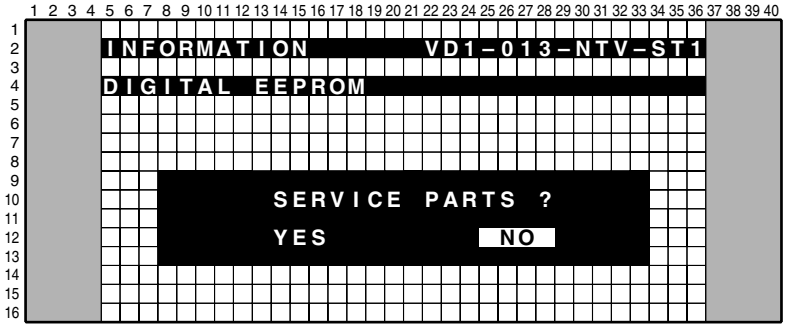
(This must be performed after the DIGITAL Assy is replaced.)

To download the data from the backup ROM, press the ENTER key while the above screen is displayed. The display changes as shown below. Move the cursor to YES then press the ENTER key. The data in the backup ROM are downloaded into the new Assy.

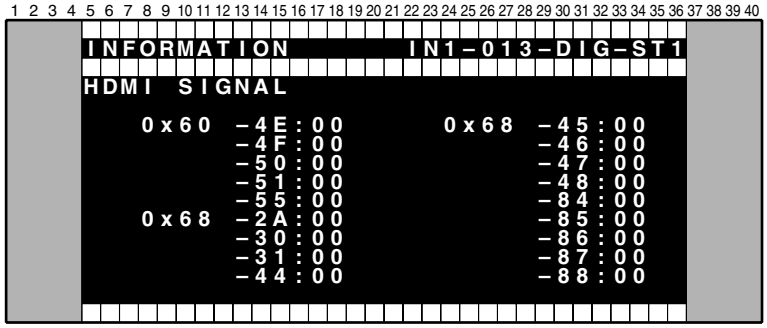


• Clearing the data in the ROM of the DIGITAL Assy

The display below is automatically displayed after either YES or NO is selected on the display shown above. Move the cursor to YES then press the ENTER key. Then all data on adjustment values in the ROM of the DIGITAL Assy are cleared.

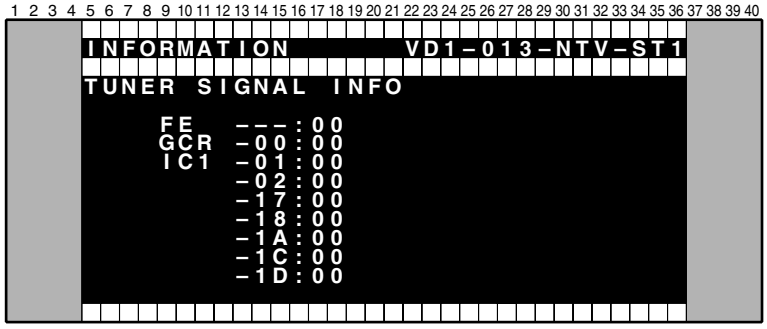


13. HDMI SIGNAL INFO



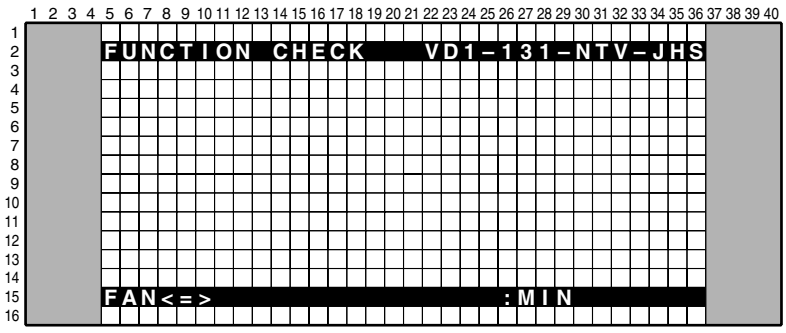
Technical examination display
(Reading status registers in HDMI receiver and displaying them by HEX value.)

14. TUNER SIGNAL INFO



For technical discussion

② FUNCTION CHECK



No last memory in this menu

No.	Display	Detail	Remarks	232C Command
1	IC1 TEST		For CMX	
2	IC2 TEST		For CMX	
3	IC3 TEST		For CMX	
4	IC4 TEST		For CMX	
5	FAN <=>	: MINI ⇔ CONT ⇔ MAX		*1
6	AFT <=>	UNLOCKED ⇔ LOCKED	For Factory use	ALN/ALY
7	BSD ANT VOLT <=>	15V ⇔ 11V ⇔ 0	Only domestic model	BVH/BVM/BVL
8	AUTO PRESET CHECK <=>	NO ⇔ YES	Only Europe HD and for Factory use	None

2.1 FAN

Controls FAN speed by force. (MIN : STOP, CNT : Low Speed, MAX : High)
Temp sensor is working only displaying data value in service factory mode.
After getting off service factory mode, this function is set to normal automatically.

2.2 AFT LOCK

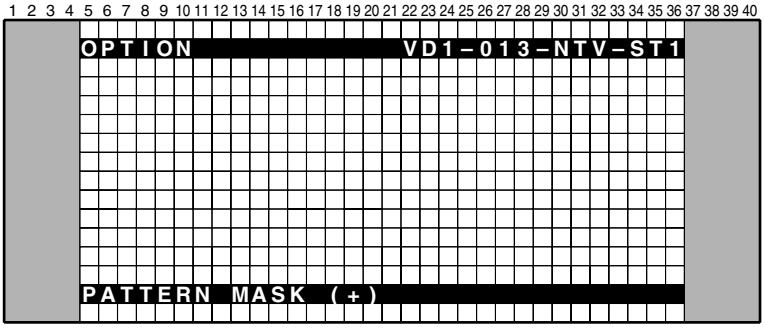
For production line use only
Stop AFT tuner received function and receive a center frequency.
After turning off a unit (including stand-by mode), this setting is set normal (AFT function) automatically.
It's performed to two tuner and DTV tuner to U.S. model.

2.3 AUTO PRESET CHECK

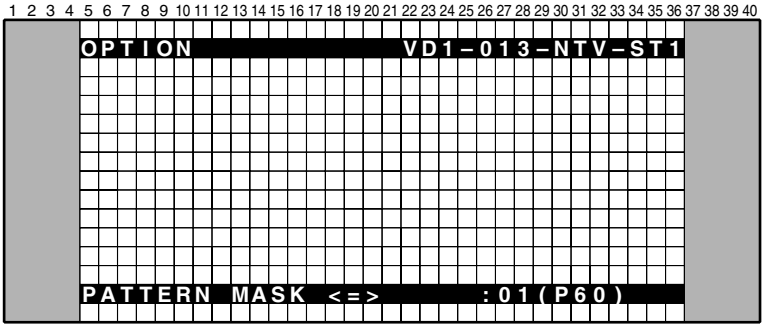
For production line use only

Select No.	Display	Function	Remarks
1 (Default)	NO		Performing this function when shifting from "NO" to "YES".
7	YES	Perform AUTO PRESET function to specific frequency to reduce AUTO RESET time at production line.	

⑤ OPTION mode



No.	Function/Display	Content	Corresponding RS-232C Command
1	PATTERN MASK (+)	Selecting the pattern mask of IC4	
2	FULL MASK (+)	Selecting the raster mask of IC4	
3	PEAK LIMITER	ON ⇔ FFF	PAN/PAF
4	DYNAMIC RANGE	ON ⇔ FFF	DYY/DYN
5	EDID WRITE MODE	DISABLE ⇔ ENABLE	EWY/EWN
9	EU CH PRESET	FACTORY ⇔ USER	



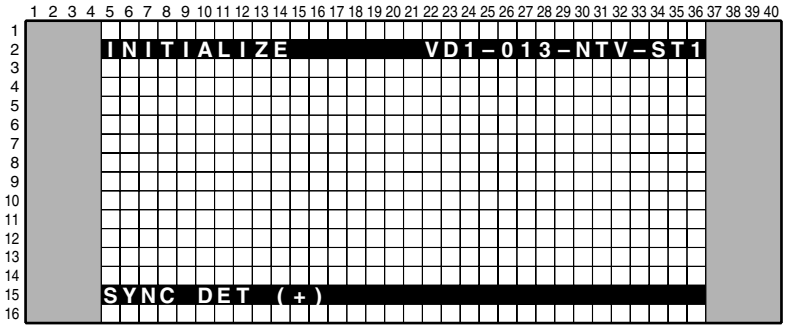
The mask frequency can be cyclically changed (see the table below) by pressing the left or right cursor key. The mask pattern can be cyclically changed by pressing the up or down cursor key. Approximately 2 seconds after either the up or down cursor key is pressed, the mask screen will appear.

• Frequency selection while the mask is displayed

No.	Function/Display	Content	Corresponding RS-232C Command
0	V50	Video 50-Hz sequence	F50
1	V60 (initial value)	Video 60-Hz sequence	F60
2	P60	PC 60-Hz sequence	F61
3	P70	PC 70-Hz sequence	F70
4	V72	Video 72-Hz sequence	F72
5	V75	Video 75-Hz sequence	F75

⑥ INITIALIZE mode

(For managing switching of the initial settings and destination setting)



No.	Function/Display	Content
1	SYNC DET (+)	For setting the parameter for sync detection of IC1/GCR
2	DRIVE MODE (+)	(Not used)
3	SIDE MASK LEV (+)	(Not used)
4	PANEL REVICE (+)	(Not used)
5	FINAL SETUP (+)	
6	C TEMP LOW (+)	
7	C TEMP MID LOW (+)	
8	C TEMP STD (+)	
9	C TEMP MID HIGH (+)	
10	C TEMP HIGH (+)	
11	BSD FACTORY (+)	(Not used)
12	UART SELECT <=>	1200-232C ⇔ ••• ⇔ 38400-232C ⇔ 9600-SR+
13	CVT AUTO <=>	DISABLE ⇔ ENABLE (For Factory use)

- When there is a modification log, if the " i+ " key is held pressed for at least 3 seconds while the above display is displayed, the modification log will be cleared.

• UART SELCT

Option No.	Function / Display	Operation / Control	Remarks	Corresponding RS-232C Command
1 (initial setting)	9600-SR+	To set to SR+ (9600 BPS)	For switching external communication between RS-232C and SR+	BR0
2	1200-232C	To set to RS-232C (1200 BPS)		BR1
3	2400-232C	To set to RS-232C (2400 BPS)		BR2
4	4800-232C	To set to RS-232C (4800 BPS)		BR3
5	9600-232C	To set to RS-232C (9600 BPS)		BR4
6	19200-232C	To set to RS-232C (19200 BPS)		BR5
7	38400-232C	To set to RS-232C (38400 BPS)		BR6

Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Refer to the section "6.3 USING RS-232C COMMANDS".

6.8 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode.
Before using RS-232C commands, it is necessary to change the factory presetting. See "6.3. USING RS-232C COMMANDS."

Command	Operation	Remarks
A		
ABL	Adjusting power consumption	
B		
BCP	Transmitting the backup data to the DIGITAL Assy	
BR0	UART setting: SR+ (9600 BPS)	Any RS-232C command to the Media Receiver becomes disabled as soon as this command is issued.
BR1	UART setting: RS-232C (1200 BPS)	
BR2	UART setting: RS-232C (2400 BPS)	
BR3	UART setting: RS-232C (4800 BPS)	
BR4	UART setting: RS-232C (9600 BPS)	
BR5	UART setting: RS-232C (19200 BPS)	
BR6	UART setting: RS-232C (38400 BPS)	
BSL	Adjusting side mask B	
BVH	Setting the power supply for the BSD antenna to 15 V	
BVL	Setting the power supply for the BSD antenna to 11 V	
BVM	Setting the power supply for the BSD antenna to 0 V	
BYG	BY GAIN	
C		
CNG	Clearing MR NG information	
CPC	Clearing the power-on counter	
CPD	Clearing power-down information	
CPM	Clearing the pulse meter	
CSD	Clearing shutdown information	
D		
DIY	Turning on the on-screen display	While the DIY command is in force, the duration of on-screen display is unlimited.
DIN	Turning off the on-screen display	On-screen display is prohibited.
DOF	Erasing the currently displayed indications	If another command is received by the Media Receiver, an on-screen display is displayed.
DRF	Turning off the power for the drive system	
DRN	Turning on the power for the drive system	
DW*	Decreasing the adjustment value by *	*: 1-9, 0 (0 means 10), or F (making the adjustment value the minimum)
E		
EWN	Prohibiting writing of EDID data	
EWY	Permitting writing of EDID data	
F		
F50	Video 50-Hz sequence	
F60	Video 60-Hz sequence	
F61	PC 60-Hz sequence	
F70	PC 70-Hz sequence	
F72	Video 72-Hz sequence	
F75	Video 75-Hz sequence	
FAJ	Determining the adjustment values for the unit	
FAN	Turning Service Factory mode off	The GUI equivalent to that usually displayed when the power is turned on is displayed.
G		The GET-group commands are effective at any time, including during Standby mode.
GAJ	Obtaining the adjustment values for the panel	
GMM	Switching the gamma levels	Setting value: 000-007
GNG	Obtaining NG data of the MR	
GNM	Obtaining the serial No. of the MR	
GPC	Obtaining the P ON COUNTER value	
GPD	Obtaining power-down information	
GPR	Obtaining the PANEL REVISE data	
GPM	Obtaining the PULSE METER data	
GPW	Obtaining the PANEL W/B data	
GS1	Obtaining the version data for each device	
GS2	Obtaining data on various operations	
GSD	Obtaining shutdown information	
GSL	Adjusting side mask G	

Command	Operation	Remarks
I		
IN1	Input selection: Input 1	
IN2	Input selection: Input 2	
IN3	Input selection: Input 3	
IN4	Input selection: Input 4	
IN5	Input selection: Input 5	
INA	Selection of the tuner for terrestrial analog signals (Antenna A)	
INB	Selection of the tuner for terrestrial analog signals (Antenna B)	
INC	Selection of the tuner for terrestrial digital signals	
IND	Selection of the tuner for satellite digital signals (BS)	
INE	Selection of the tuner for satellite digital signals (CS1)	
INF	Selection of the tuner for satellite digital signals (CS2)	
ING	Selection of iLink input functions	
INF	SD card	
M		
M00	Mask mode: OFF	
M01	White: 0-100%	
M02	Aging mask	
M03	Aging mask (detection of still picture: OFF)	
M10	RAMP slant 1	
M11	RAMP slant 4	
M12	RAMP slant 1 shifting	
M13	RAMP slant 4 shifting	
M14	V RAMP	
M15	H/V RAMP	
M1G	IC1 MAIN GAIN	
M1O	IC1 MAIN OFFSET	
M20	WINDOW-Low: 102 / High: 870	
M21	WINDOW-Low: 102 / High: 1023	
M22	WINDOW-Low: 0 / High: 1023	
M23	WINDOW-High: 1023 (CENTER)	
M24	WINDOW-PEAK WINDOW	Area 1.25%
M25	WINDOW-1/7 vertical window	
M26	WINDOW-magenta/green stripe	
M27	WINDOW-green/magenta stripe	
M28	Window (black & white [1 × 8], checkered pattern [for EMG check])	
M29	Window (for W/B adjustment, magenta, yellow)	
M2E	Wiper to prevent phosphor burn	
M30	COLOR BAR	
M31	Slanted lines	
M51	Raster-white	
M52	Raster-red	
M53	Raster-green	
M54	Raster-blue	
M55	Raster-black	
M56	Raster-cyan	
M57	Raster-magenta	
M58	Raster-yellow	
M59	Raster-cyan 274	
M60	Raster-50 flesh color	
M61	Raster-50 light purple	
M62	Raster-50 sky blue	
M63	Raster-red 779	
M64	Raster-cyan 218	
M65	Raster-cyan 448	
M66	Raster-43 flesh color	
M67	Raster-red 640	
M68	Raster-magenta 98	
M69	Raster-43 sky blue 1	
M70	Raster-43 sky blue 2	
M71	Raster-43 light purple	
M72	Raster-blue 960	
M73	Raster-gray 511 (spare)	
M74	Raster-gray 511 (spare)	

Command	Operation	Remarks
M		
MRG	AD MAIN R GAIN	
MRO	AD MAIN R OFFSET	
MGG	AD MAIN G GAIN	
MGO	AD MAIN G OFFSET	
MBG	AD MAIN B GAIN	
MBO	AD MAIN B OFFSET	
P		
PBH	Panel W/B B-HIGH adjustment	
PBL	Panel W/B B-LOW adjustment	
PGH	Panel W/B G-HIGH adjustment	
PGL	Panel W/B G-LOW adjustment	
POF	Turning the power OFF	
PRH	Panel W/B R-HIGH adjustment	
PRL	Panel W/B R-LOW adjustment	
R		
RYG	RY GAIN	
RSL	Adjustment of side mask R	
S		
S1G	IC1 SUB GAIN	
S1O	IC1 SUB OFFSET	
SBG	AD SUB B GAIN	
SBO	AD SUB B OFFSET	
SFI	Initialization of the full mask table	
SGG	AD SUB G GAIN	
SGO	AD SUB G OFFSET	
SRG	AD SUB R GAIN	
SRO	AD SUB R OFFSET	
T		
TSY	Enabling the TRAP switch	The command is effective even during Standby mode.
U		
UP*	Increasing the adjustment value by *	*: 1-9, 0 (0 means 10), or F (making the adjustment value the maximum)
UAJ	Resetting all data in the DIGITAL Assy to those of a new service part	
V		
VOF	Offset voltage adjustment	
VSU	SUS voltage adjustment	
X		
XD1	D1 trailing-edge pulse of X-SUS	
XD2	D2 trailing-edge pulse of X-SUS	
XU1	U1 leading-edge pulse of X-SUS	
XU2	U2 leading-edge pulse of X-SUS	
Y		
YD1	D1 trailing-edge pulse of Y-SUS	
YD2	D2 trailing-edge pulse of Y-SUS	
YD3	D3 trailing-edge pulse of Y-SUS	
YD4	D4 trailing-edge pulse of Y-SUS	
YU1	U1 leading-edge pulse of Y-SUS	
YU2	U2 leading-edge pulse of Y-SUS	

6.9 OUTLINE OF COMMANDS

■ GET Commands

GS1: Returning information on the model and the version of the software

Order	Data	Size
1	Data on the display	3 bytes
2	Version of the module microcomputer	4 bytes
3	Version of the IC4-MANTA	4 bytes
4	Sequence version (50VIDEO)	4 bytes
5	Sequence version (50PC)	4 bytes
6	Sequence version (43VIDEO)	4 bytes
7	Sequence version (43PC)	4 bytes
8	Version of the IF microcomputer	4 bytes
9	Version of the main microcomputer	4 bytes
10	Version of the IC3-MANTA	4 bytes
11	Version of the OSD	4 bytes
12	Version of the DTV microcomputer (only for models for North America)	4 bytes
13	Version of the CC microcomputer (only for models for North America)	4 bytes
14	Version of the TEXT microcomputer (only for models for Europe)	4 bytes

Breakdown of the data on the display

Data	Model
HD5	PDP-504HD series
HD4	PDP-434HD series

GPM: Returning the data of the PDP pulse meter

Order	Data	Size
1	Pulse meter (Block area 1)	10 bytes
2	Pulse meter (Block area 2)	10 bytes
3	Pulse meter (Block area 3)	10 bytes
4	Pulse meter (Block area 4)	10 bytes
5	Pulse meter (Block area 5)	10 bytes

Note: Refer to the service manual of the panel.

GPC: Returning the cumulative number of times the power to the PDP was turned on

Order	Data	Size
1	Power-on counter	8 bytes

• Commands for clearing the logs

Parameter	Corresponding RS-232C Command
PD INFO	CPD
SD INFO	CSD
NG INFO	CNG
HOUR METER	CHM
MR HOUR METER (Only for the system model)	CHR
PULSE METER	CPM
P ON COUNTER	CPC

GPD: Returning the power-down data (log) of the PDP

Order	Data	Size	Order	Data	Size
1	Latest "1st PD" data	1 byte	17	Fifth latest “1st PD” data	1 byte
2	Latest "2nd PD" data	1 byte	18	Fifth latest “2nd PD” data	1 byte
3	Data of hour meter for the latest PD	7 bytes	19	Data of hour meter for the fifth latest PD	7 bytes
4	Data on temperature for the latest PD (TEMP1)	3 bytes	20	Data on temperature for the fifth latest PD (TEMP1)	3 bytes
5	Second latest “1st PD” data	1 byte	21	Sixth latest “1st PD” data	1 byte
6	Second latest “2nd PD” data	1 byte	22	Sixth latest “2nd PD” data	1 byte
7	Data of hour meter for the second latest PD	7 bytes	23	Data of hour meter for the sixth latest PD	7 bytes
8	Data on temperature for the second latest PD (TEMP1)	3 bytes	24	Data on temperature for the sixth latest PD (TEMP1)	3 bytes
9	Third latest “1st PD” data	1 byte	25	Seventh latest “1st PD” data	1 byte
10	Third latest “2nd PD” data	1 byte	26	Seventh latest “2nd PD” data	1 byte
11	Data of hour meter for the third latest PD	7 bytes	27	Data of hour meter for the seventh latest PD	7 bytes
12	Data on temperature for the third latest PD (TEMP1)	3 bytes	28	Data on temperature for the seventh latest PD (TEMP1)	3 bytes
13	Fourth latest “1st PD” data	1 byte	29	Eighth latest “1st PD” data	1 byte
14	Fourth latest “2nd PD” data	1 byte	30	Eighth latest “2nd PD” data	1 byte
15	Data of hour meter for the fourth latest PD	7 bytes	31	Data of hour meter for the eighth latest PD	7 bytes
16	Data on temperature for the fourth latest PD (TEMP1)	3 bytes	32	Data on temperature for the eighth latest PD (TEMP1)	3 bytes

• Details on "1st/2nd PD" data

Data	Power-down Point
0	No power-down
1	Not used (for MR-POWER)
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D, E	Spare
F	Power-down point not identified

GSD: Returning the shutdown data (log) of the PDP

Order	Data	Size	Order	Data	Size
1	Latest SD data	1 byte	17	Fifth latest SD data	1 byte
2	Data of subcategory for the latest SD	1 byte	18	Data of subcategory for the fifth latest SD	1 byte
3	Data of hour meter for the latest SD	7 bytes	19	Data of hour meter for the fifth latest SD	7 bytes
4	Data on temperature for the latest SD (TEMP1)	3 bytes	20	Data on temperature for the fifth latest SD (TEMP1)	3 bytes
5	Second latest SD data	1 byte	21	Sixth latest SD data	1 byte
6	Data of subcategory for the second latest SD	1 byte	22	Data of subcategory for the sixth latest SD	1 byte
7	Data of hour meter for the second latest SD	7 bytes	23	Data of hour meter for the sixth latest SD	7 bytes
8	Data on temperature for the second latest SD (TEMP1)	3 bytes	24	Data on temperature for the sixth latest SD (TEMP1)	3 bytes
9	Third latest SD data	1 byte	25	Seventh latest SD data	1 byte
10	Data of subcategory for the third latest SD	1 byte	26	Data of subcategory for the seventh latest SD	1 byte
11	Data of hour meter for the third latest SD	7 bytes	27	Data of hour meter for the seventh latest SD	7 bytes
12	Data on temperature for the third latest SD (TEMP1)	3 bytes	28	Data on temperature for the seventh latest SD (TEMP1)	3 bytes
13	Fourth latest SD data	1 byte	29	Eighth latest SD data	1 byte
14	Data of subcategory for the fourth latest SD	1 byte	30	Data of subcategory for the eighth latest SD	1 byte
15	Data of hour meter for the fourth latest SD	7 bytes	31	Data of hour meter for the eighth latest SD	7 bytes
16	Data on temperature for the fourth latest SD (TEMP1)	3 bytes	32	Data on temperature for the eighth latest SD (TEMP1)	3 bytes

• Details on the shutdown data

Data	Cause of Shutdown
0	No abnormality
1	IC4 (IC5401)
2	Module microcomputer IIC
3	Abnormality in RST2 (power decrease of DC-DC converter)
4	Panel having abnormally high temperature
5	Audio failure (short-circuiting of the speakers)
6 - F	Spares

• Data on the shutdown subcategories for the module microcomputer IIC

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (4k) (IC5206)
2	EEPROM (2k) (IC4002)
3	Volume IC (IC3502)

GNG: Returning the data (logs) on power-down and shutdown of the Media Receiver

Order	Data	Size	Order	Data	Size
1	Latest NG data	1 byte	17	Fifth latest NG data	1 byte
2	Data of subcategory for the latest NG	1 byte	18	Data of subcategory for the fifth latest NG	1 byte
3	Data of MR hour meter for the latest NG	7 bytes	19	Data of MR hour meter for the fifth latest NG	7 bytes
4	Data on temperature for the latest NG (TEMP2)	3 bytes	20	Data on temperature for the fifth latest NG (TEMP2)	3 bytes
5	Second latest NG data	1 byte	21	Sixth latest NG data	1 byte
6	Data of subcategory for the second latest NG	1 byte	22	Data of subcategory for the sixth latest NG	1 byte
7	Data of MR hour meter for the second latest NG	7 bytes	23	Data of MR hour meter for the sixth latest NG	7 bytes
8	Data on temperature for the second latest NG (TEMP2)	3 bytes	24	Data on temperature for the sixth latest NG (TEMP2)	3 bytes
9	Third latest NG data	1 byte	25	Seventh latest NG data	1 byte
10	Data of subcategory for the third latest NG	1 byte	26	Data of subcategory for the seventh latest NG	1 byte
11	Data of MR hour meter for the third latest NG	7 bytes	27	Data of MR hour meter for the seventh latest NG	7 bytes
12	Data on temperature for the third latest NG (TEMP2)	3 bytes	28	Data on temperature for the seventh latest NG (TEMP2)	3 bytes
13	Fourth latest NG data	1 byte	29	Eighth latest NG data	1 byte
14	Data of subcategory for the fourth latest NG	1 byte	30	Data of subcategory for the eighth latest NG	1 byte
15	Data of MR hour meter for the fourth latest NG	7 bytes	31	Data of MR hour meter for the eighth latest NG	7 bytes
16	Data on temperature for the fourth latest NG (TEMP2)	3 bytes	32	Data on temperature for the eighth latest NG (TEMP2)	3 bytes

• Details on the NG data

Data	Cause of Shutdown
0	No abnormality
1	Power-down of the MR power supply
2	Communication failure of the module microcomputer
3	Three-wire serial communication failure of the main microcomputer
4	IIC communication failure of the main microcomputer
5	Communication failure of the main microcomputer
6	MR having abnormally high temperature
7	Fan stopped
8	Failure in the digital tuner
9	Abnormality in RST2 of the MR (power decrease of DC-DC converter)

• Data on the subcategories for failure in 3-wire serial communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	Communication failure of the IF microcomputer
2	IC2 communication failure
3	IC3 communication failure

• Data on the subcategories for failure in the digital tuner

Data	Cause of Shutdown
0	No subcategory (DTV for North America)
1	Communication failure of the BSD microcomputer (PS/RST)
2	BSD microcomputer (RETRY)
3	BSD unit (DEVICE)
4	PC CARD
5	
6	

• Data on the subcategories for failure in IIC communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (128k) (IC7205)
2	GCR (Only domestic model)
3	IC1 main (IC6107)
4	IC1 sub (IC6255)
5	AD-PLL main (IC6402)
6	AD-PLL sub (IC6602)
7	IC6 (IC6951)
8	HDMI1
9	Not used
A	7-3VIDEO SW (IC8002)
B	6-2RGB SW (IC8005)
C	Front end 1 (U7501)
D	Not used
E	Not used
F	Not used
G	Not used
H	Not used
I	NICAM-NG (IC7702)
K	TX-COM (IC8904)
L	TX-DEV (IC8904)
M	TX-MEM (IC8904 or IC9101 or IC9104)

GAJ: Returning drive-related adjustment values of the PDP

Order	Data	Size
1	Currently used ABL table	3 bytes
2	Upper limit of the electric power	3 bytes
3	Vsus adjustment value	3 bytes
4	Vofs adjustment value	3 bytes
5	X-SUS-U1 adjustment value (XU1)	3 bytes
6	X-SUS-U2 adjustment value (XU2)	3 bytes
7	X-SUS-D2 adjustment value (XD2)	3 bytes
8	X-SUS-D1 adjustment value (XD1)	3 bytes
9	Y-SUS-U1 adjustment value (YU1)	3 bytes
10	Y-SUS-U2 adjustment value (YU2)	3 bytes
11	Y-SUS-D1-2 adjustment value (YD2)	3 bytes
12	Y-SUS-D1-1 adjustment value (YD1)	3 bytes
13	Y-SUS-D2-2 adjustment value (YD4)	3 bytes
14	Y-SUS-D2-1 adjustment value (YD3)	3 bytes

Data	Table
AB1	ABL table for NTSC
AB2	ABL table for PAL
AB3	ABL table for PC

GPW: Returning RGB-level-related adjustment values of the PDP

Order	Data	Size
1	Panel W/B table currently used	3 bytes
2	Main contrast	4 bytes
3	Red contrast of the W/B adjustment value	4 bytes
4	Green contrast of the W/B adjustment value	4 bytes
5	Blue contrast of the W/B adjustment value	4 bytes
6	Main brightness	4 bytes
7	Red brightness of the W/B adjustment value	4 bytes
8	Green brightness of the W/B adjustment value	4 bytes
9	Blue brightness of the W/B adjustment value	4 bytes

Data	Table
PT1	ABL table for NTSC
PT2	ABL table for PAL
PT3	Reserved table

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TROUBLE SHOOTING

● Image for the composite or S signal is not displayed

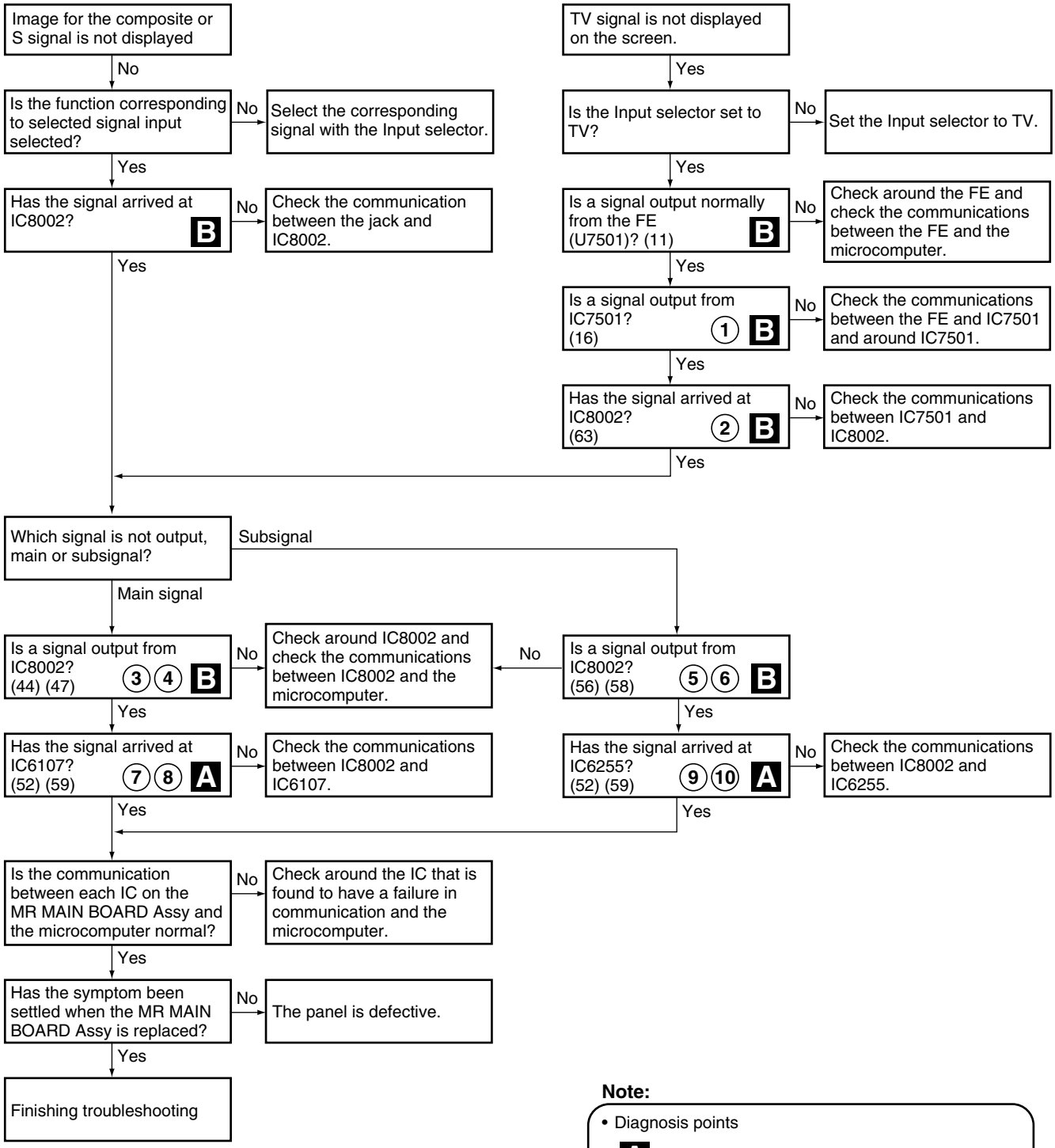
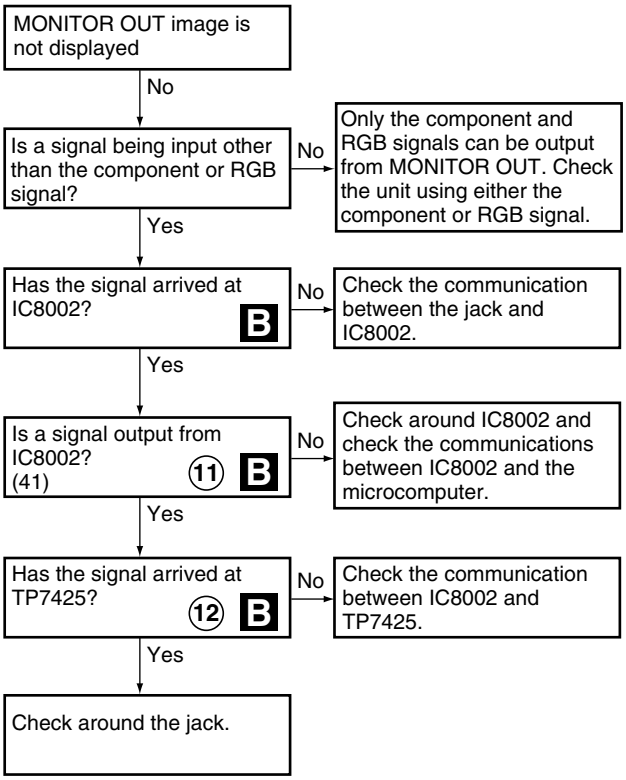


Image for the composite or S signal is not displayed
No
Is the function corresponding to selected signal input selected?
No
Select the corresponding signal with the Input selector.
Yes
Has the signal arrived at IC8002? B
No
Check the communication between the jack and IC8002.
Yes
TV signal is not displayed on the screen.
Yes
Is the Input selector set to TV?
No
Set the Input selector to TV.
Yes
Is a signal output normally from the FE (U7501)? (11) B
No
Check around the FE and check the communications between the FE and the microcomputer.
Yes
Is a signal output from IC7501? (16) 1 B
No
Check the communications between the FE and IC7501 and around IC7501.
Yes
Has the signal arrived at IC8002? (63) 2 B
No
Check the communications between IC7501 and IC8002.
Yes
Which signal is not output, main or subsignal?
Subsignal
Main signal
Is a signal output from IC8002? (44) (47) 3 4 B
No
Check around IC8002 and check the communications between IC8002 and the microcomputer.
No
Is a signal output from IC8002? (56) (58) 5 6 B
Yes
Yes
Has the signal arrived at IC6107? (52) (59) 7 8 A
No
Check the communications between IC8002 and IC6107.
Has the signal arrived at IC6255? (52) (59) 9 10 A
No
Check the communications between IC8002 and IC6255.
Yes
Yes
Is the communication between each IC on the MR MAIN BOARD Assy and the microcomputer normal?
No
Check around the IC that is found to have a failure in communication and the microcomputer.
Yes
Has the symptom been settled when the MR MAIN BOARD Assy is replaced?
No
The panel is defective.
Yes
Finishing troubleshooting

Note:

- Diagnosis points
  - **A MR MAIN BOARD ASSY**
  - **B AV BOARD ASSY**
- For check the communication with the microcomputer, refer to the section 6.7 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

● MONITOR OUT image is not displayed


MONITOR OUT image is not displayed
No
Is a signal being input other than the component or RGB signal?
No
Only the component and RGB signals can be output from MONITOR OUT. Check the unit using either the component or RGB signal.
Yes
Has the signal arrived at IC8002?
B
No
Check the communication between the jack and IC8002.
Yes
Is a signal output from IC8002? (41)
11
B
No
Check around IC8002 and check the communications between IC8002 and the microcomputer.
Yes
Has the signal arrived at TP7425?
12
B
No
Check the communication between IC8002 and TP7425.
Yes
Check around the jack.

● Image for the component or RGB signals is not displayed

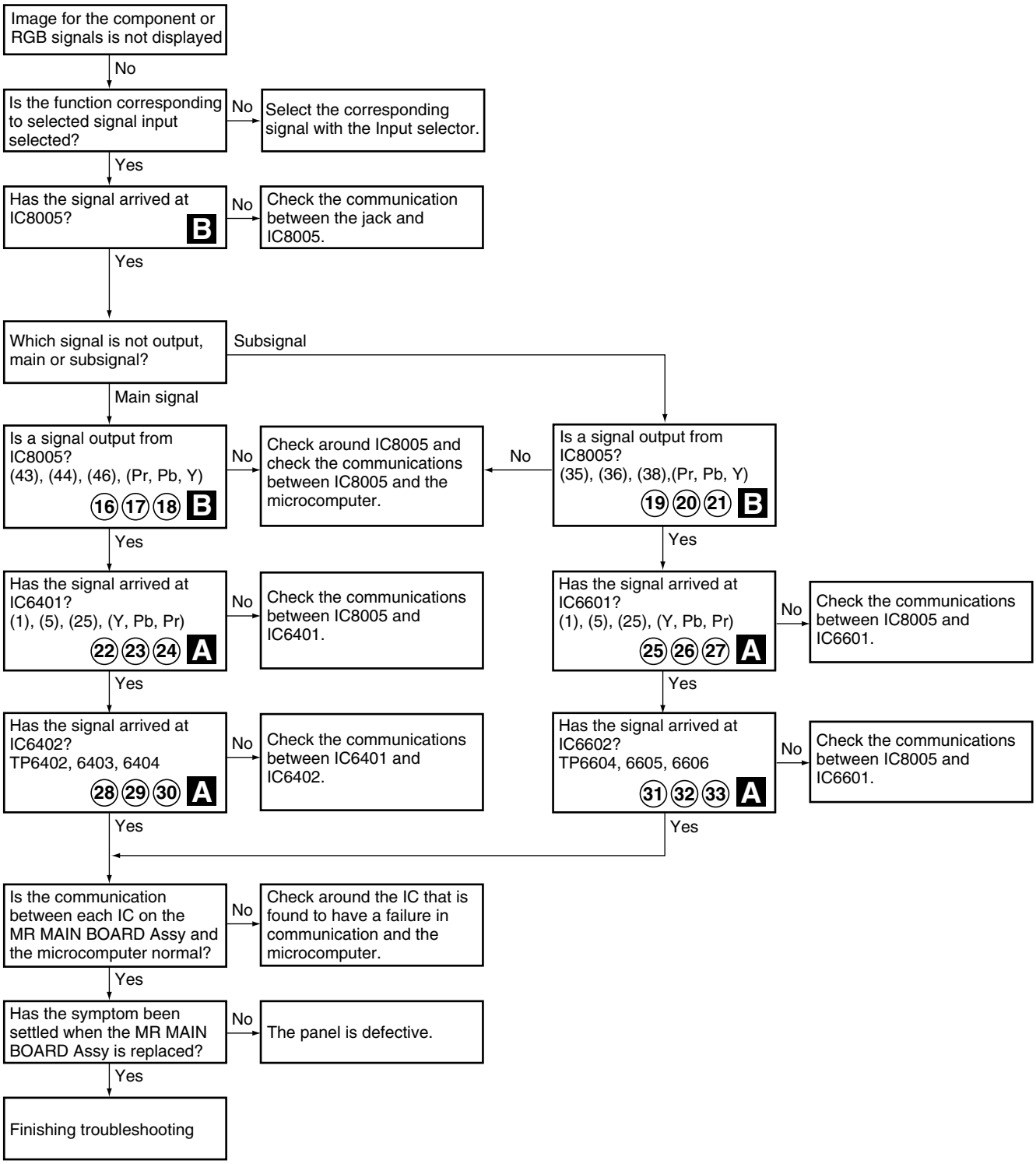
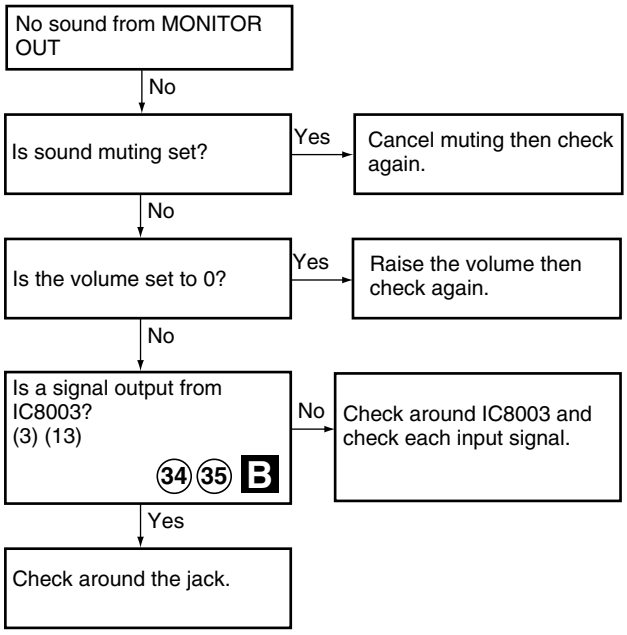
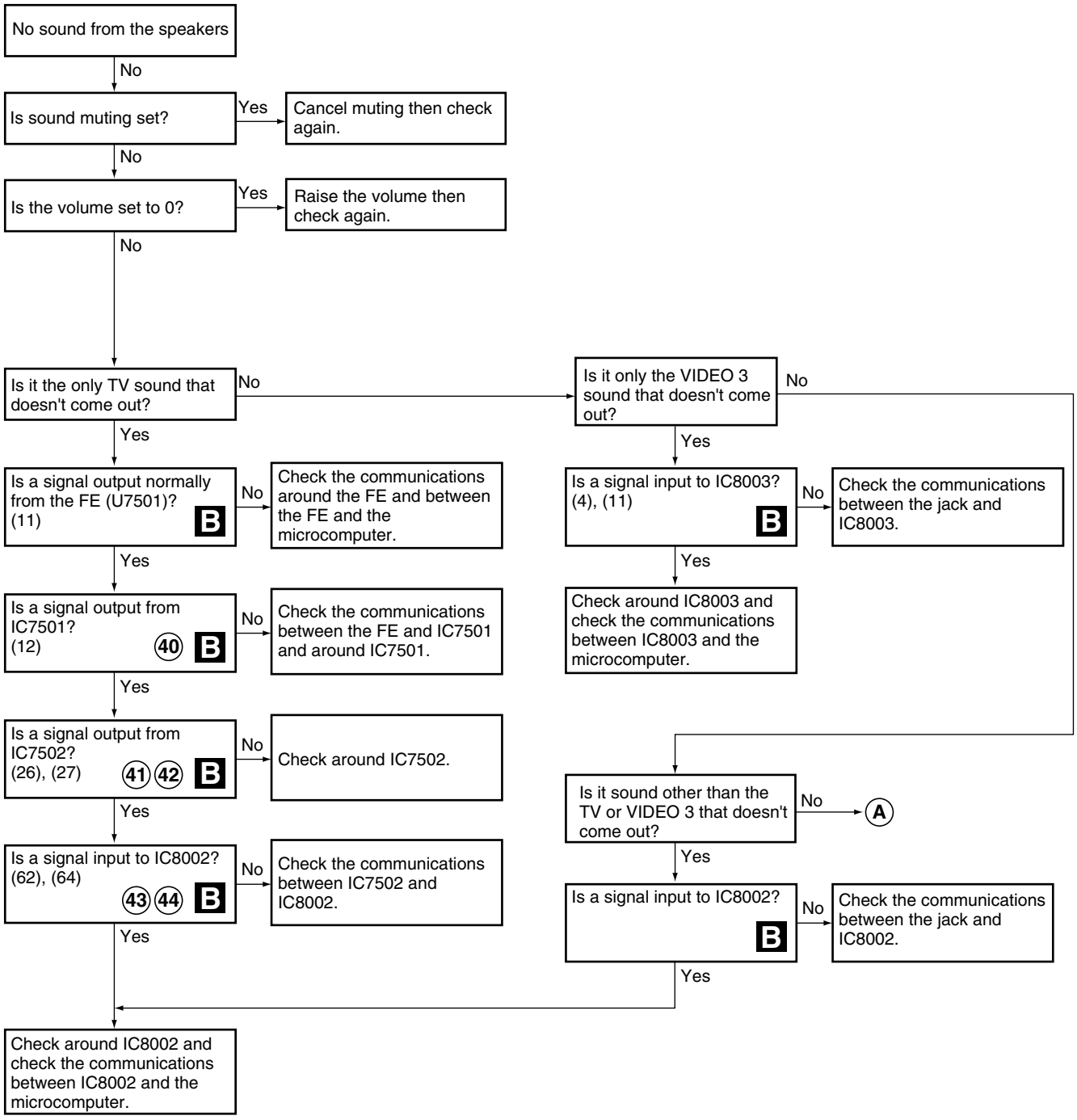


Image for the component or RGB signals is not displayed
No
Is the function corresponding to selected signal input selected?
No
Select the corresponding signal with the Input selector.
Yes
Has the signal arrived at IC8005? B
No
Check the communication between the jack and IC8005.
Yes
Which signal is not output, main or subsignal?
Subsignal
Main signal
Is a signal output from IC8005? (43), (44), (46), (Pr, Pb, Y) 16 17 18 B
No
Check around IC8005 and check the communications between IC8005 and the microcomputer.
No
Is a signal output from IC8005? (35), (36), (38),(Pr, Pb, Y) 19 20 21 B
Yes
Yes
Has the signal arrived at IC6401? (1), (5), (25), (Y, Pb, Pr) 22 23 24 A
No
Check the communications between IC8005 and IC6401.
Has the signal arrived at IC6601? (1), (5), (25), (Y, Pb, Pr) 25 26 27 A
No
Check the communications between IC8005 and IC6601.
Yes
Yes
Has the signal arrived at IC6402? TP6402, 6403, 6404 28 29 30 A
No
Check the communications between IC6401 and IC6402.
Has the signal arrived at IC6602? TP6604, 6605, 6606 31 32 33 A
No
Check the communications between IC8005 and IC6601.
Yes
Yes
Is the communication between each IC on the MR MAIN BOARD Assy and the microcomputer normal?
No
Check around the IC that is found to have a failure in communication and the microcomputer.
Yes
Has the symptom been settled when the MR MAIN BOARD Assy is replaced?
No
The panel is defective.
Yes
Finishing troubleshooting

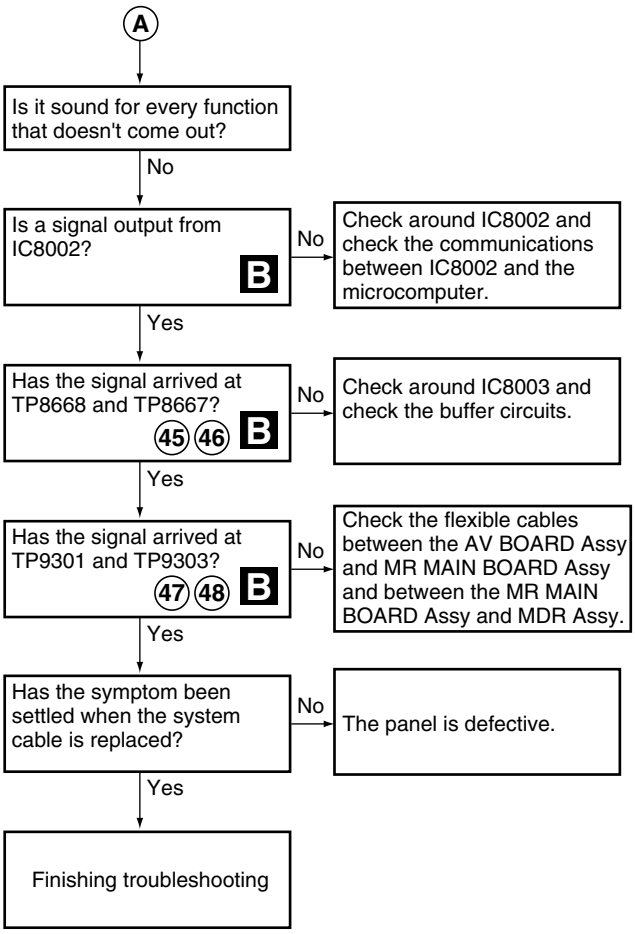
● No sound


No sound from MONITOR OUT
No
Is sound muting set?
Yes
Cancel muting then check again.
No
Is the volume set to 0?
Yes
Raise the volume then check again.
No
Is a signal output from IC8003?
(3) (13)
34 35 B
No
Check around IC8003 and check each input signal.
Yes
Check around the jack.

● No sound from the speakers (1/2)

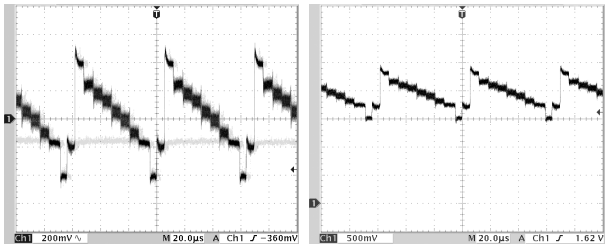

No sound from the speakers
No
Is sound muting set?
Yes
Cancel muting then check again.
No
Is the volume set to 0?
Yes
Raise the volume then check again.
No
Is it the only TV sound that doesn't come out?
No
Yes
Is it only the VIDEO 3 sound that doesn't come out?
No
Yes
Is a signal output normally from the FE (U7501)? (11) B
No
Check the communications around the FE and between the FE and the microcomputer.
Yes
Is a signal input to IC8003? (4), (11) B
No
Check the communications between the jack and IC8003.
Yes
Is a signal output from IC7501? (12) 40 B
No
Check the communications between the FE and IC7501 and around IC7501.
Yes
Check around IC8003 and check the communications between IC8003 and the microcomputer.
Yes
Is a signal output from IC7502? (26), (27) 41 42 B
No
Check around IC7502.
Yes
Is it sound other than the TV or VIDEO 3 that doesn't come out?
No
A
Yes
Is a signal input to IC8002? (62), (64) 43 44 B
No
Check the communications between IC7502 and IC8002.
Yes
Is a signal input to IC8002? B
No
Check the communications between the jack and IC8002.
Yes
Check around IC8002 and check the communications between IC8002 and the microcomputer.

● No sound from the speakers (2/2)


A
Is it sound for every function that doesn't come out?
No
Is a signal output from IC8002?
B
No
Check around IC8002 and check the communications between IC8002 and the microcomputer.
Yes
Has the signal arrived at TP8668 and TP8667?
45 46
B
No
Check around IC8003 and check the buffer circuits.
Yes
Has the signal arrived at TP9301 and TP9303?
47 48
B
No
Check the flexible cables between the AV BOARD Assy and MR MAIN BOARD Assy and between the MR MAIN BOARD Assy and MDR Assy.
Yes
Has the symptom been settled when the system cable is replaced?
No
The panel is defective.
Yes
Finishing troubleshooting

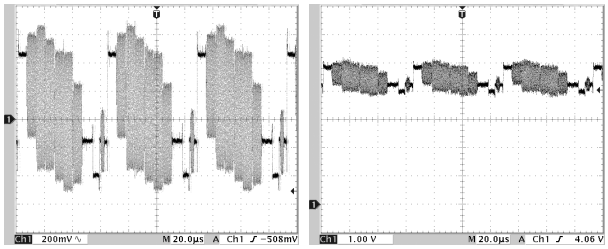
A

1 **U7501 - pin 19**



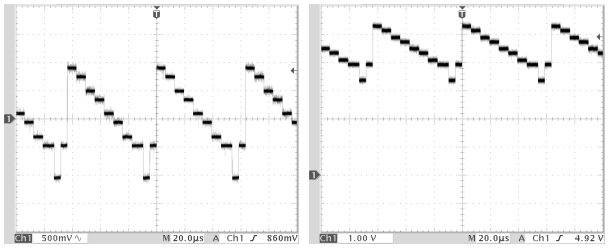
B

2 **IC8002 - pin 63**



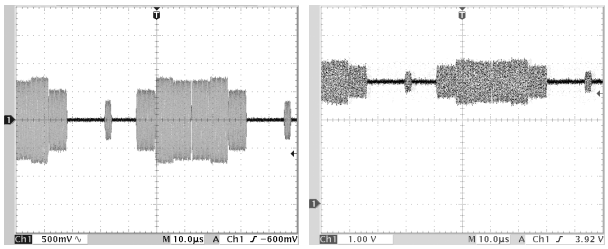
C

3 **IC8002 - pin 44**



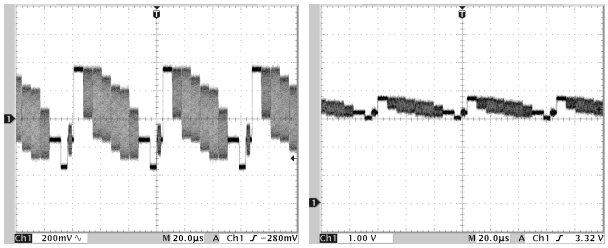
D

4 **IC8002 - pin 47**



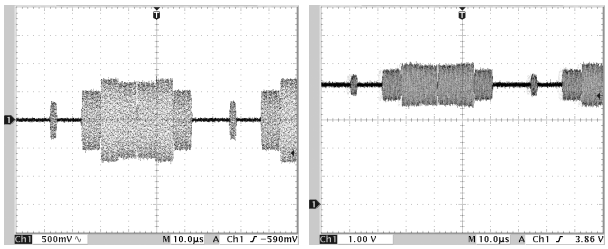
E

5 **IC8002 - pin 56**

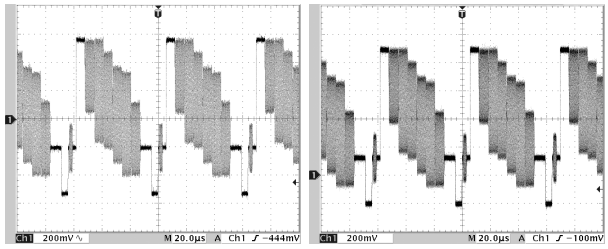


F

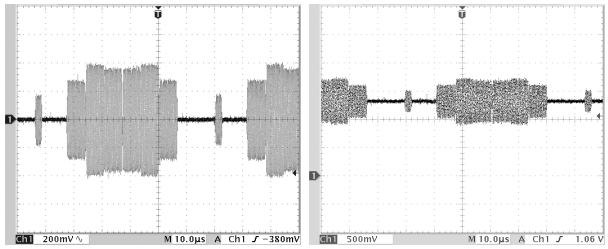
6 **IC8002 - pin 58**



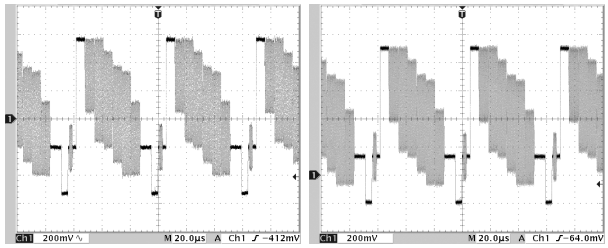
7 **IC6107 - pin 52**



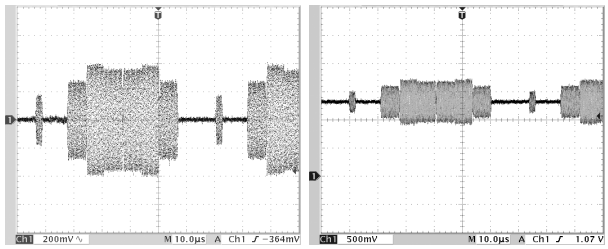
8 **IC6107 - pin 59**



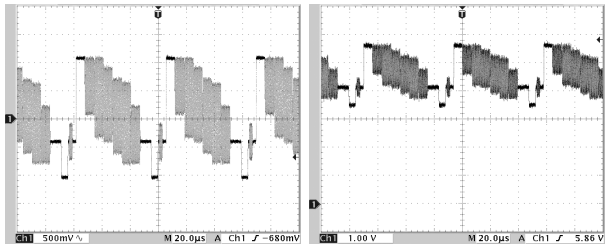
9 **IC6255 - pin 52**



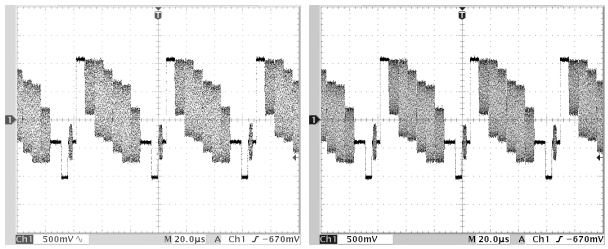
10 **IC6255 - pin 59**



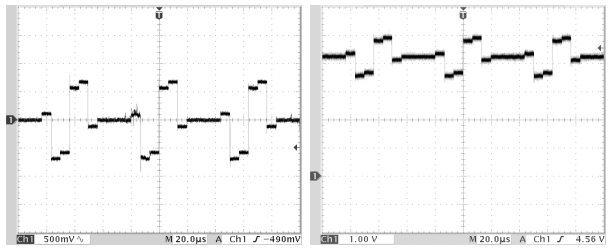
11 **IC8002 - pin 41**



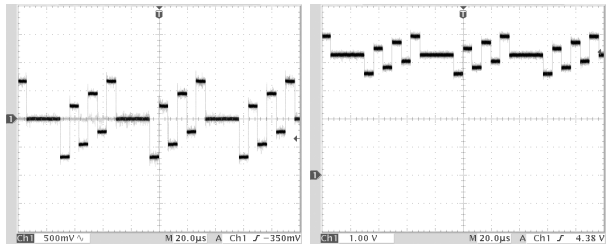
12 **TP7425**



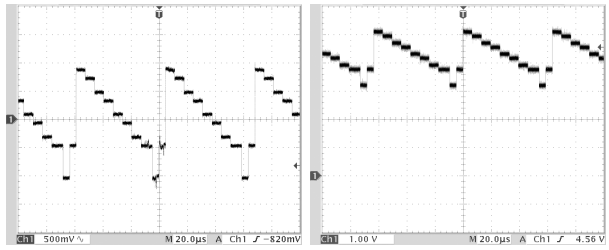
(19) IC8005 - pin 35



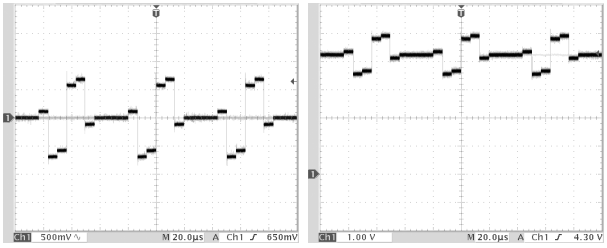
(20) IC8005 - pin 36



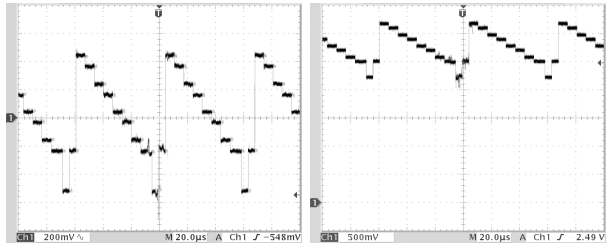
(21) IC8005 - pin 38



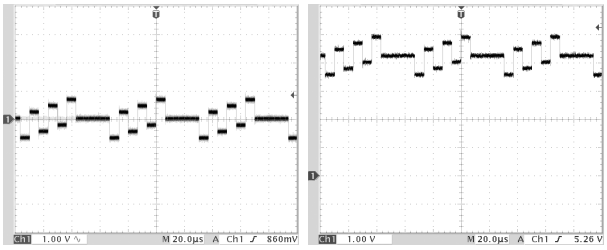
(16) IC8005 - pin 43



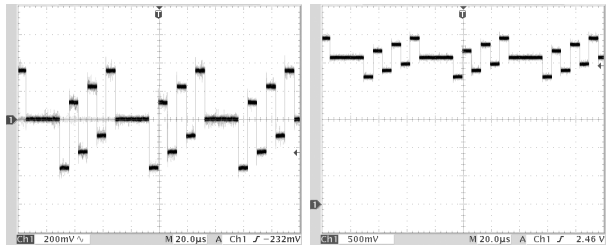
(22) IC6401 - pin 1



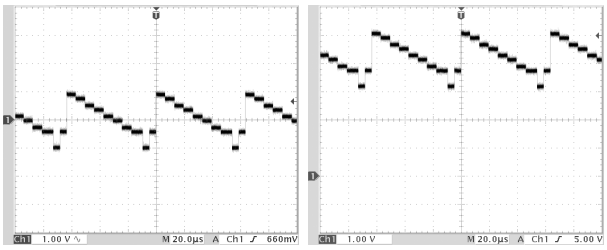
(17) IC8005 - pin 44



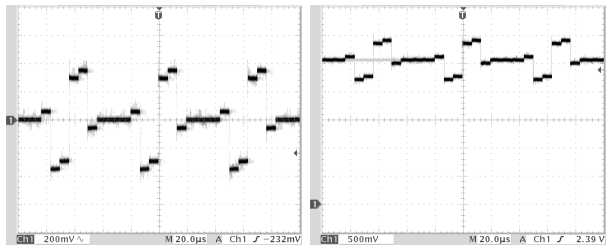
(23) IC6401 - pin 5



(18) IC8005 - pin 46



(24) IC6401 - pin 25



A

B

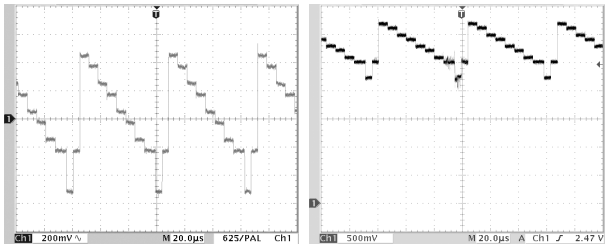
C

D

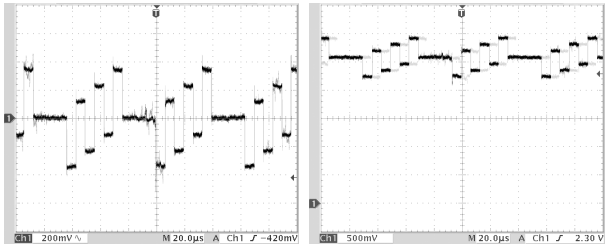
E

F

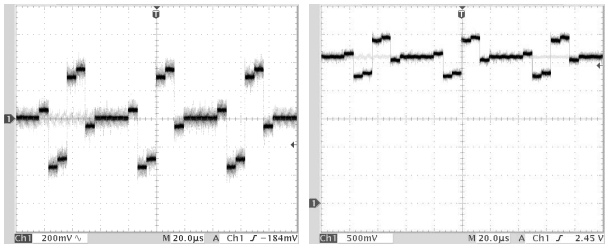
25 **IC6601 - pin 1**



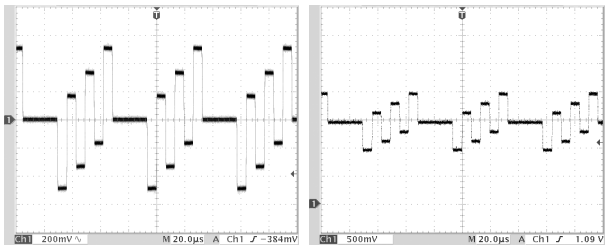
26 **IC6601 - pin 5**



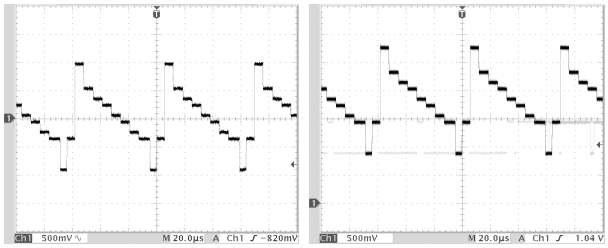
27 **IC6601 - pin 25**



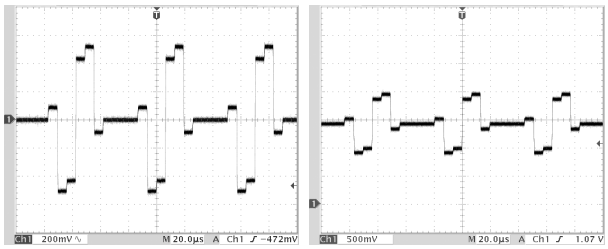
28 **TP6402**



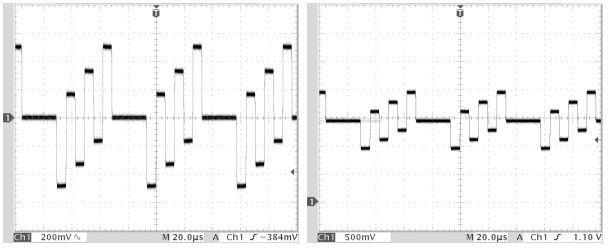
29 **TP6403**



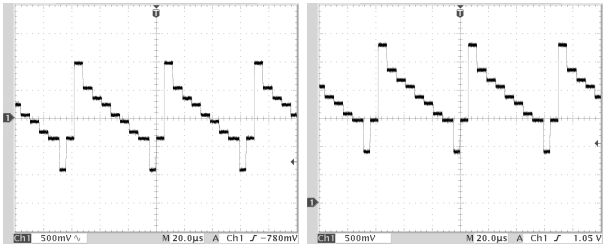
30 **TP6404**



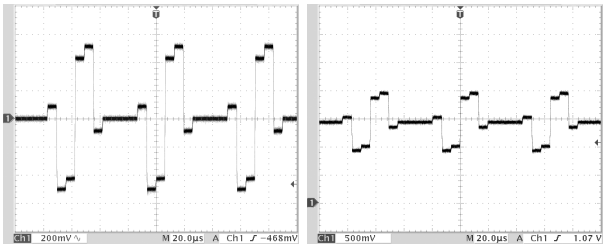
31 **TP6604**



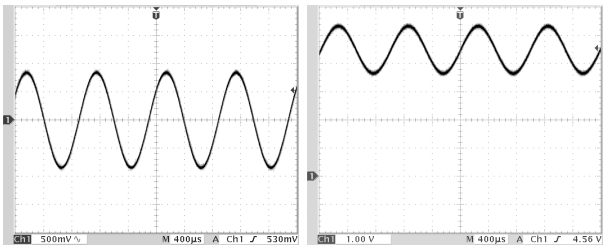
32 **TP6605**



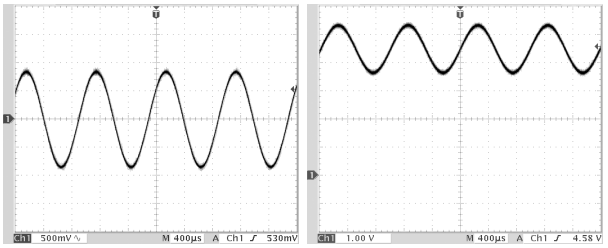
33 **TP6606**



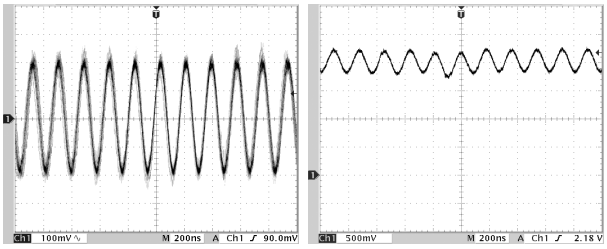
34 **IC8003 - pin 3**



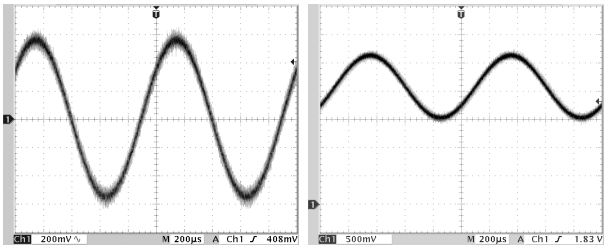
35 **IC8003 - pin 13**



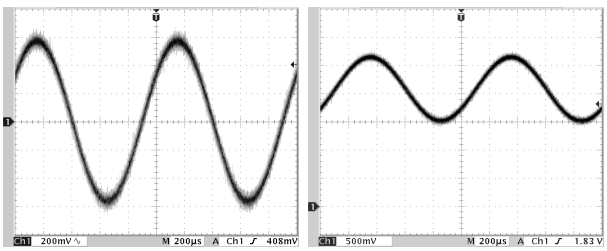
(40) **U7501 - pin 16**



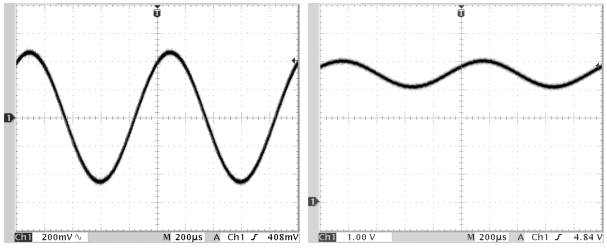
(41) **IC7503 - pin 22**



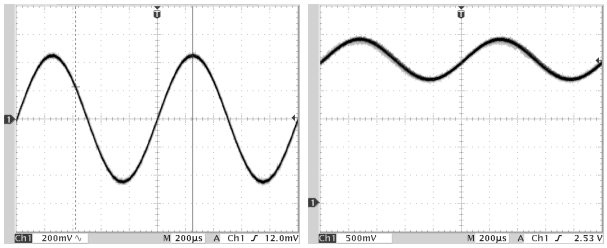
(42) **IC7503 - pin 23**



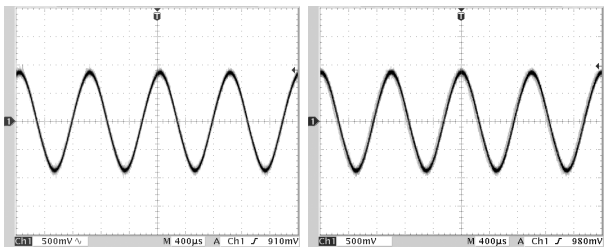
(43) **IC8002 - pin 62**



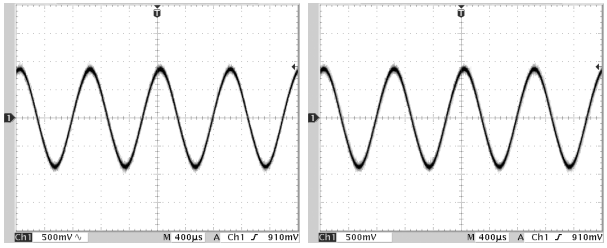
(44) **IC8002 - pin 64**



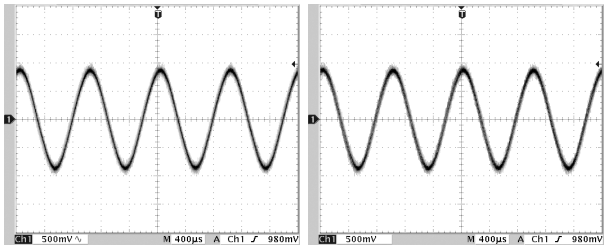
(45) **TP8667**



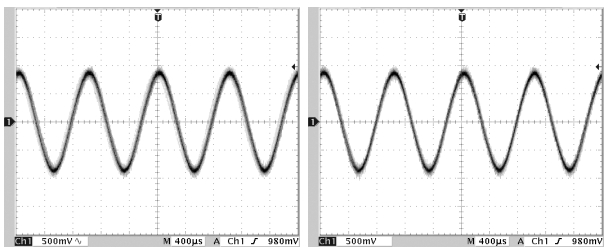
(46) **TP8668**



(47) **TP9301**



(48) **TP9303**



7.1.2 DISASSEMBLY

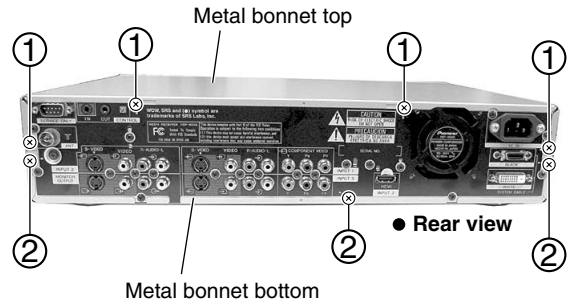
1 Metal bonnet top and metal bonnet bottom

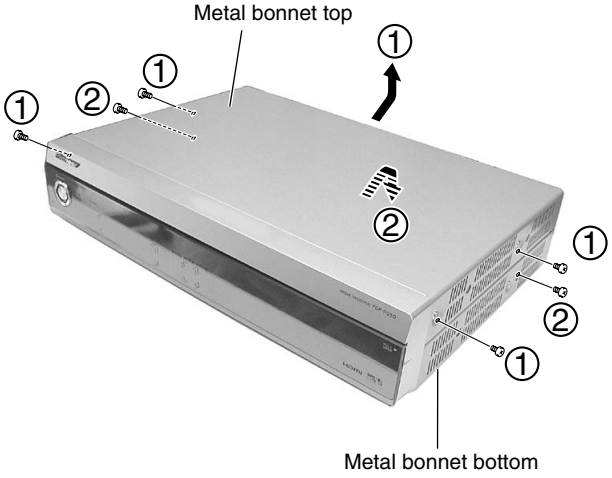
① Remove the metal bonnet top by removing the eight screws.

② Remove the metal bonnet bottom by removing the five screws.

Caution :

Please remove it after pulling it in a rear direction because bonnet top and metal bonnet bottom are hard to reduce.





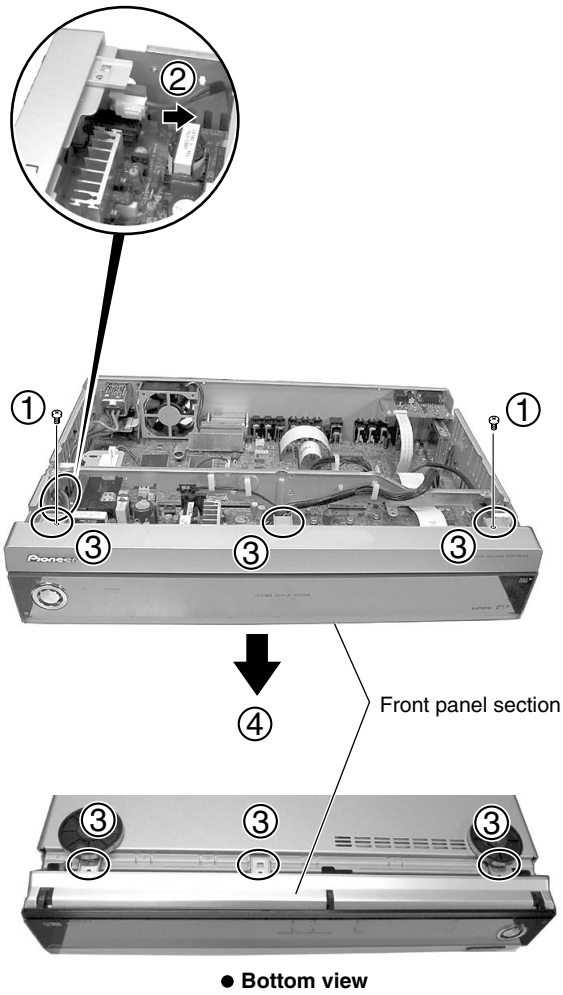
2 Front panel section

① Remove the two screws.

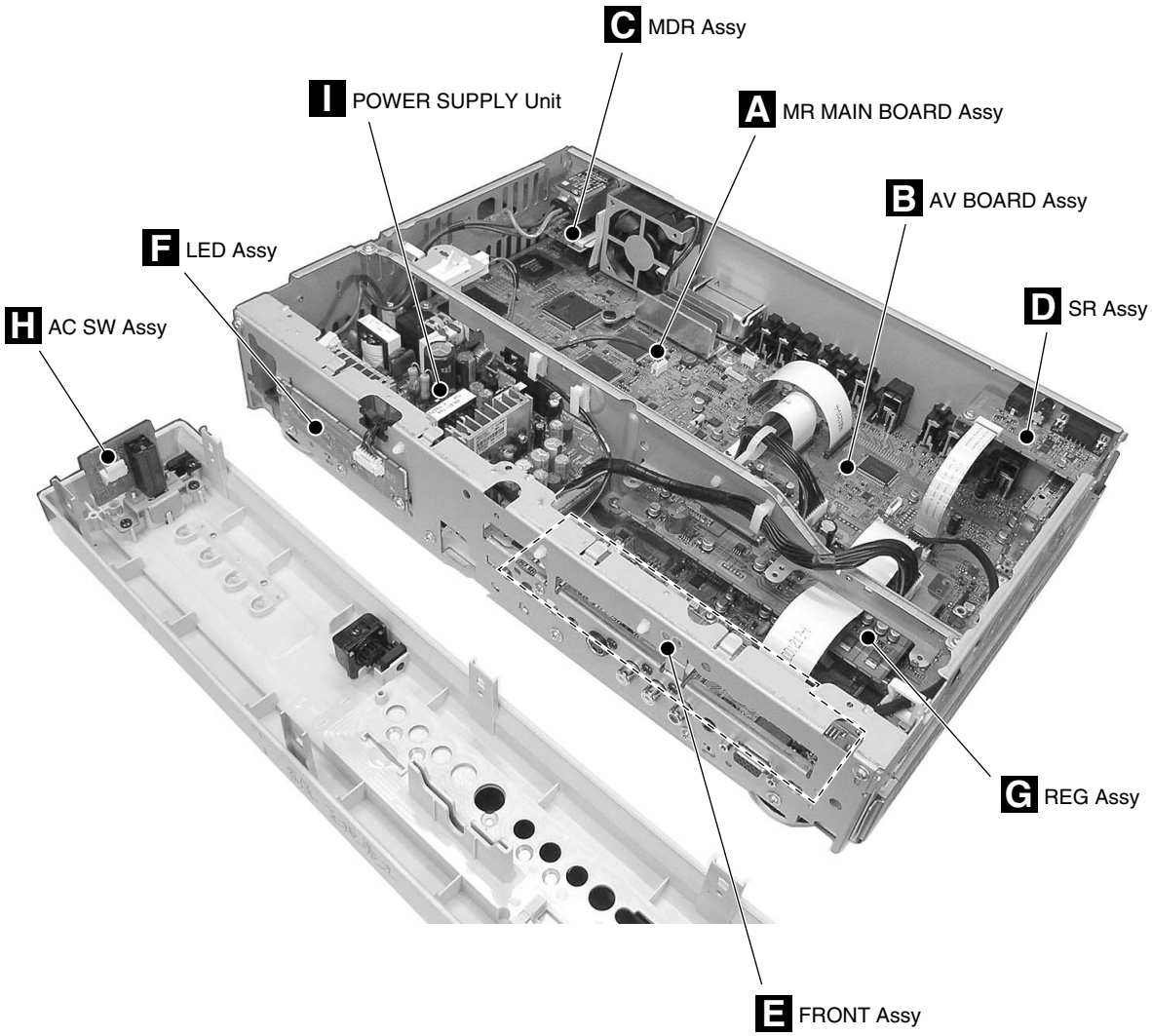
② Disconnect the one connector.

③ Unhook the six hooks.

④ Remove the front panel section.



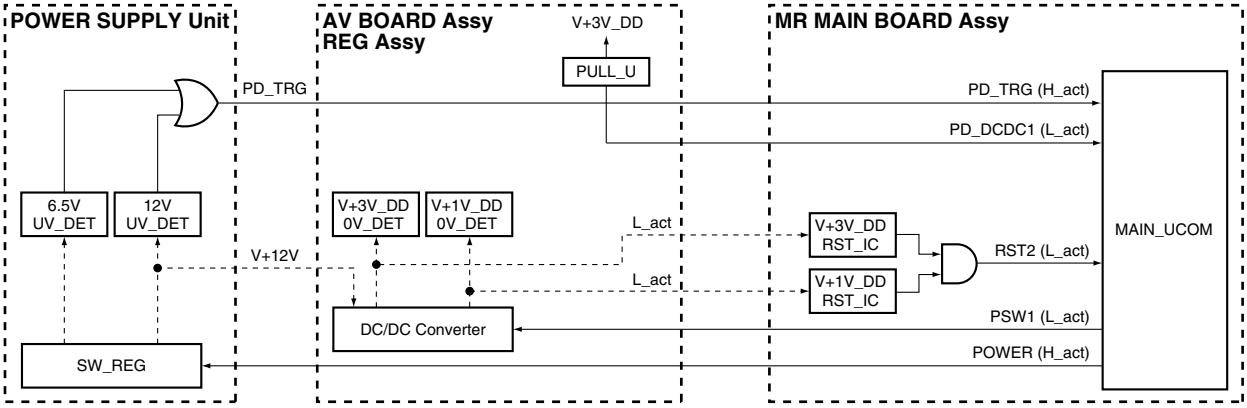
PCB Location



7.2 EXPLANATION
7.2.1 PROCESSING IN ABNORMALITY

Power supply and DC-DC converter

● **Circuit diagram**

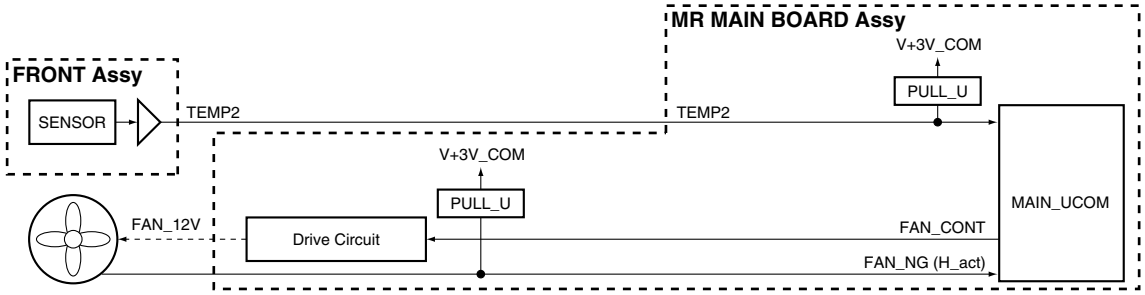


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
PD_MAIN (PD_TRG)	MR_PWR	38	Power-down with H
PD_DCDC1	ASIC power supply	43	Shutdown with L
RST2	ASIC power supply	98	Shutdown with L

Fan and temperature sensor

● **Circuit diagram**

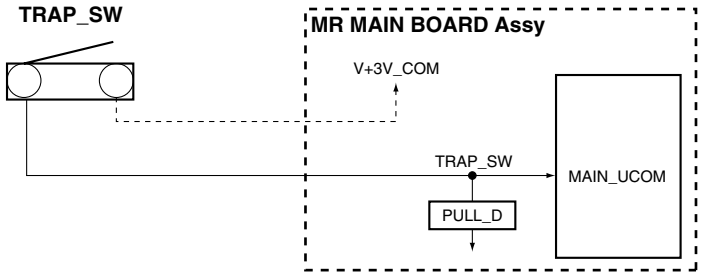


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
FAN_NG	FAN	31	Shutdown with H
TEMP2	Abnormally high temperature in the MR	50	Shutdown when the value exceeds the predetermined value

TRAP_SW

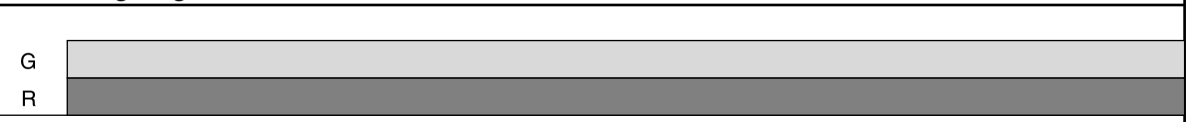
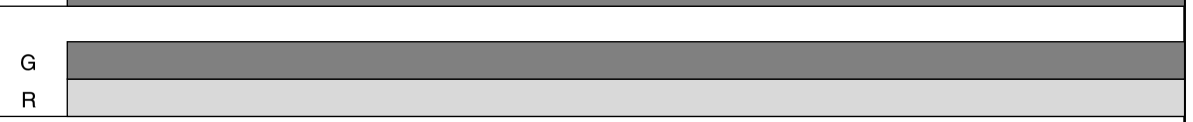
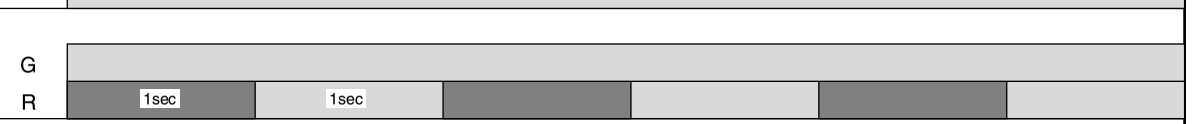
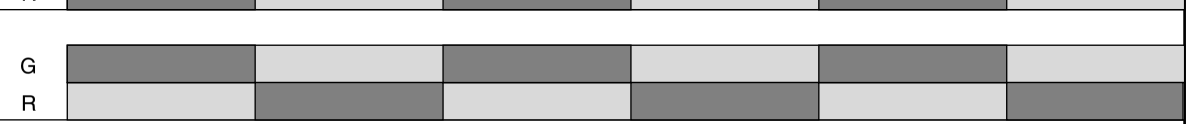
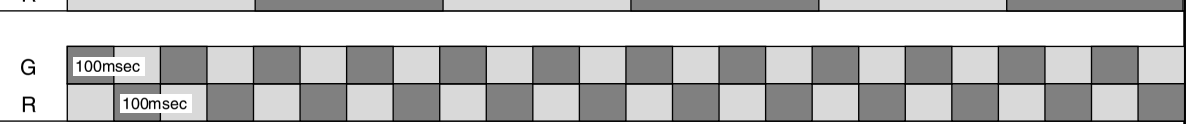
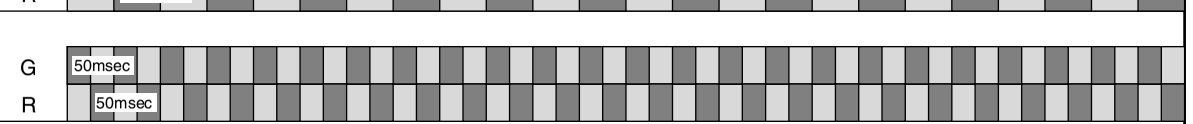
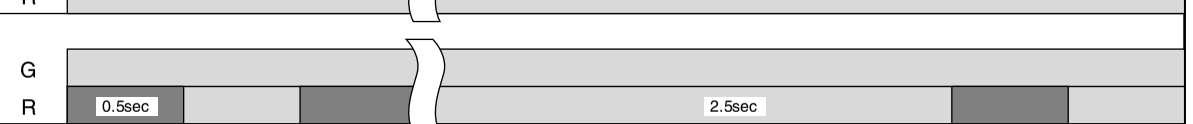
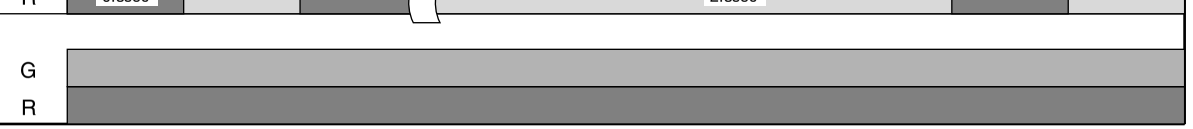
● Circuit diagram



● Specifications for port monitoring

Port Name	SD/PD Indication	Assigned Pin	Active
TRAP_SW	Modification tried	30	OFF with H

LED-lighting patterns

Status of the Unit		LED-lighting Pattern
Standby, power management	Lit in red	
Power on	Lit in green	
PDP's power not on	Flashing in red (at 1-sec intervals)	
System cable disconnected *	Flashing alternately in red and green (at 1-sec intervals)	
Waiting for start of rewriting by the microcomputer		
Waiting for finish of rewriting by the microcomputer		
Shutdown (circuit protection)	Flashing in green n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
Power-down (circuit protection)	Flashing in red for n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
TRAP switch operation		

* In this case, the red and green areas on the screen of the panel flash alternately.

■ Defective points assumed from the number of times of LED flashing

No. of times of LED flashing				Category *1	Site detected as defective	Possible defective points (representative examples)	OSD when detected (warning message)
LEDs on the panel		LEDs on the MR					
RED	GRN	RED	GRN				
	Green 1	Red		SD	Panel drive IC	*2	None
	Green 2	Red			Module section IIC	*2	None
	Green 3	Red			Power decrease of DIGITAL-DC-DC	*2	None
	Green 4	Red			Panel having abnormally high temperature	*2	The power is shut down, because the internal temperature has risen. Check the temperature surrounding the PDP. (SD04)
	Green 5	Red			Short-circuiting of the speakers	*2	The power is shut down, because the protection circuit inside the unit is activated. Check if the speaker cables are short-circuited. (SD05)
Red			Green 6		Module microcomputer	Disconnection of the system cable Defective module microcomputer or its peripheral circuits of the panel (Refer to the service manual of the PDP-434PU or PDP-504PU.) Defective main microcomputer (IC7207) Failure in communication (TXD_MD, RXD_MD, REQ_MD) between the panel's module microcomputer and IC7207 (main microcomputer)	None
Red			Green 7		3-wire serial connection of the main section	Defective IC7004 or its peripheral circuits Failure in communication (TXD_IC, XD_IC2, CLK_IC2, IC2_CE, IC2_EMG) between IC7004 and IC7207 (main microcomputer) Defective IC7101 or its peripheral circuits Failure in communication (TXD_IC3, RXD_IC3, CLK_IC3, IC3_CE, IC3_REQ, IC3_BUSY) between IC7101 and IC7207 (main microcomputer)	None
Red			Green 8		IIC of the main section	Defective IC6107 (CD_MAIN) or its peripheral circuits Defective IC6255 (CD_SUB) or its peripheral circuits Defective IC6402 (AD_MAIN) or its peripheral circuits Defective IC6602 (AD_SUB) or its peripheral circuits Defective IC6881 (HDMI_2) or its peripheral circuits Defective IC6951 (BUS_SW) or its peripheral circuits Defective IC7401 (TX) or its peripheral circuits Defective U7501 (TU) or its peripheral circuits Defective IC8002 (AV_SW) or its peripheral circuits Defective IC8005 (RGB_SW) or its peripheral circuits Defective IC7205 (E2P) or its peripheral circuits Failure in communication (SCL_AV, SDA_AV, SCL_MAIN, SDA_MAIN, SCL_HDMI, SDA_HDMI, SCL_EP, SDA_EP) between one of the above devices and IC7207 (main microcomputer)	None
Red			Green 9		Main microcomputer	Defective IC7207 (main microcomputer) Defective flexible cable for communication between the MR MAIN BOARD Assy and the AV BOARD Assy Failure in communication (TXD_IF, RXD_IF, CLK_IF, IF_CE, IF_BUSY) between IC7207 (main microcomputer) and IC8702 (main microcomputer)	None
Red			Green 10		Fan	Failure in the fan motor, or the fan stopped because of dust attached to the fan	None
Red			Green 11		MR or unit having abnormally high temperature	The Media Receiver or the unit being used at high temperature	The power is shut down, because the internal temperature has risen. Check the temperature surrounding the Media Receiver. (SD11)
Red			Green 12		Digital tuner (U.S. model)	Defective digital BS/CS tuner Failure in communication (TXD_DT, RXD_DT) between the digital BS/CS tuner and IC8702 (main microcomputer)	None
Red			Green 13		ASIC power supply (DC-DC)	Defective U8502 (DD_CON) or short-circuiting elsewhere	None
Red		Red 1		PD	MR PWR	Defective Power Supply Assy of the Media Receiver, or power short-circuiting in another Assy	None
Red 2		Red			POWER	*2	None
Red 3		Red			SCAN	*2	None
Red 4		Red			SCN-5V	*2	None
Red 5		Red			Y-DRIVE	*2	None
Red 6		Red			Y-DCDC	*2	None
Red 7		Red			Y-SUS	*2	None
Red 8		Red			ADRS	*2	None
Red 9		Red			X-DRIVE	*2	None
Red 10		Red			X-DCDC	*2	None
Red 11		Red			X-SUS	*2	None
Red 12		Red			D-DCDC	*2	None

*1: Shutdown (SD) is a protective operation controlled by the microcomputer, and you can turn on the unit again using the remote control unit. Power-down (PD) is a protective operation activated by the circuitry and can be reset after AC power is off for about 1 minute.
*2: Refer to the service manual of the PDP-434PU or PDP-504PU.

7.3 PARTS
7.3.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

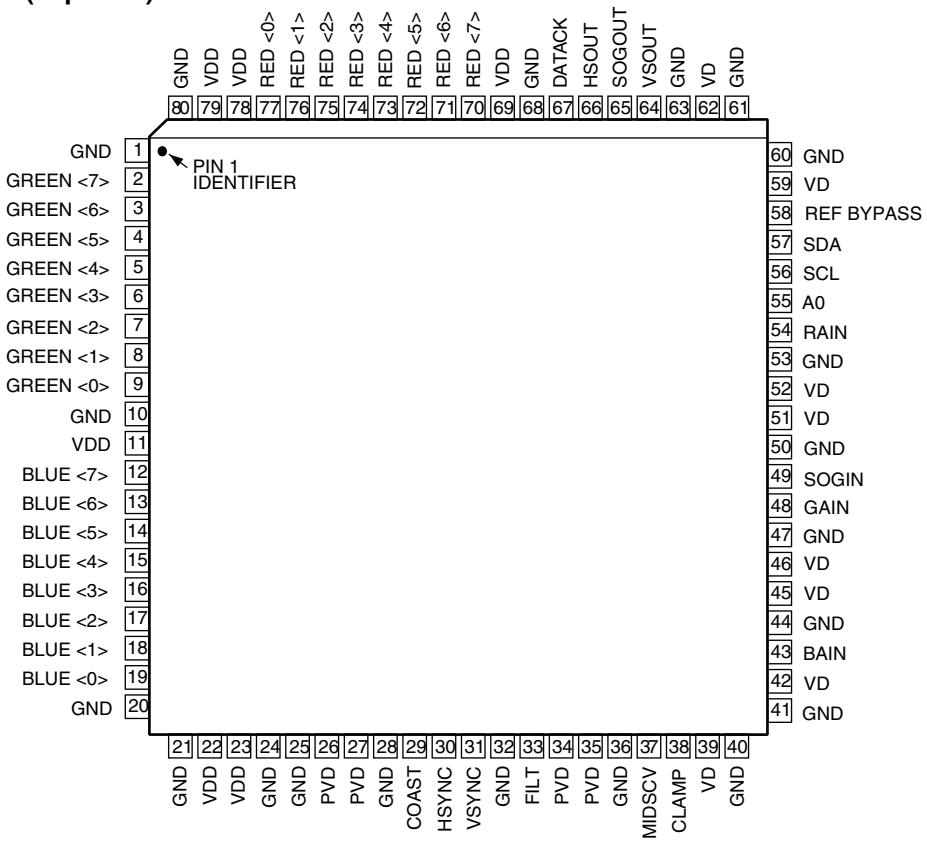
● List of IC

AD9883AKST-110, SM5301BS, BA7078AF, Sil9993CTG100, HY57V643220CT-7, MBM29PL3200BE70PFV, Sil170BCLG64, CXA2069Q, MSP3455G, MBM29LV160TE-90PFTN, HY57V641620HGT-H, TDA9818TS, TA1287FG, AXF1119, AXY1066, SDA6000

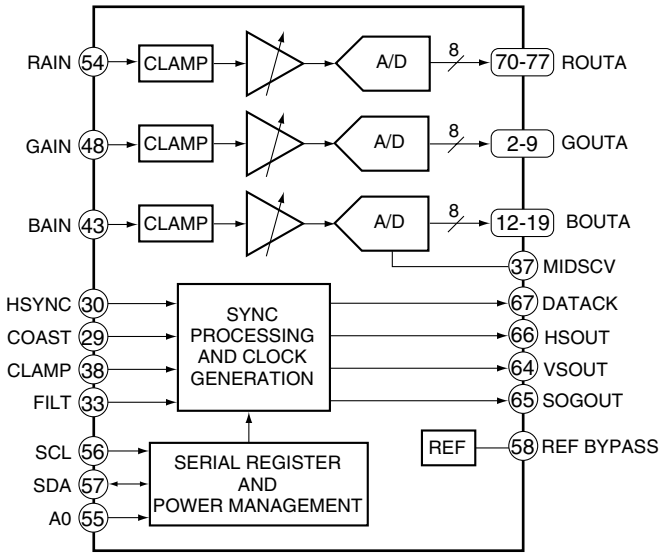
■ AD9883AKST-110 (MR MAIN BOARD ASSY : IC6402)

• 110 MSPS/140 MSPS Analog Interface

● Pin Arrangement (Top view)



● Block Diagram



● **Pin Function**

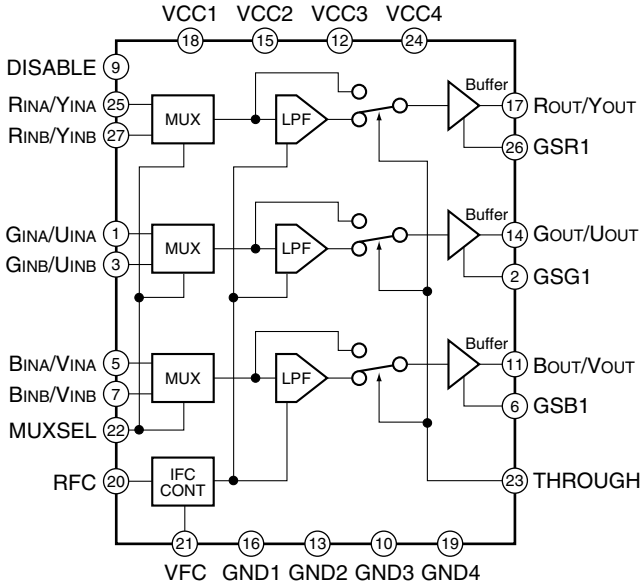
No.	Pin Name	I/O	Pin Function
1	GND	–	Ground
2	GREEN 7	O	Converter Green output (MSB)
3	GREEN 6	O	Converter Green output
4	GREEN 5	O	Converter Green output
5	GREEN 4	O	Converter Green output
6	GREEN 3	O	Converter Green output
7	GREEN 2	O	Converter Green output
8	GREEN 1	O	Converter Green output
9	GREEN 0	O	Converter Green output
10	GND	–	Ground
11	VDD	–	Power supply (3.3V)
12	BLUE 7	O	Converter Blue output (MSB)
13	BLUE 6	O	Converter Blue output
14	BLUE 5	O	Converter Blue output
15	BLUE 4	O	Converter Blue output
16	BLUE 3	O	Converter Blue output
17	BLUE 2	O	Converter Blue output
18	BLUE 1	O	Converter Blue output
19	BLUE 0	O	Converter Blue output
20	GND	–	Ground
21	GND	–	Ground
22	VDD	–	Power supply (3.3V)
23	VDD	–	Power supply (3.3V)
24	GND	–	Ground
25	GND	–	Ground
26	PVD	–	PLL power supply (3.3V)
27	PVD	–	PLL power supply (3.3V)
28	GND	–	Ground
29	COAST	I	PLL COAST signal input
30	HSYNC	I	Horizontal sync. input
31	VSYNC	I	Vertical sync. input
32	GND	–	Ground
33	FILT	–	External filter connection pin for built-in PLL
34	PVD	–	PLL power supply (3.3V)
35	PVD	–	PLL power supply (3.3V)
36	GND	–	Ground
37	MIDSCV	–	Internal middle scale voltage bias
38	CLAMP	I	Clamp input (External clamp signal)
39	VD	–	Analog power supply (3.3V)
40	GND	–	Ground
41	GND	–	Ground
42	VD	–	Analog power supply (3.3V)
43	BAIN	I	Analog input for converter B
44	GND	–	Ground
45	VD	–	Analog power supply (3.3V)

No.	Pin Name	I/O	Pin Function
46	VD	–	Analog power supply (3.3V)
47	GND	–	Ground
48	GAIN	I	Analog input for converter G
49	SOGIN	I	Input for Sync-on Green
50	GND	–	Ground
51	VD	–	Analog power supply (3.3V)
52	VD	–	Analog power supply (3.3V)
53	GND	–	Ground
54	RAIN	I	Analog input for converter R
55	A0	I	Address input 1 of serial port
56	SCL	I	Data clock (max. 100kHz) of serial port
57	SDA	I/O	Data input/output of serial port
58	REF BYPASS	–	Internal reference bypass
59	VD	–	Analog power supply (3.3V)
60	GND	–	Ground
61	GND	–	Ground
62	VD	–	Analog power supply (3.3V)
63	GND	–	Ground
64	VSOUT	O	VSYNC output (phasing with DATACLK)
65	SOGOUT	O	Sync-on-Green slicer output
66	HSOUT	O	HSYNC output (phasing with DATACLK)
67	DATACLK	O	Data input/output clock
68	GND	–	Ground
69	VDD	–	Power supply (3.3V)
70	RED 7	O	Converter Red output (MSB)
71	RED 6	O	Converter Red output
72	RED 5	O	Converter Red output
73	RED 4	O	Converter Red output
74	RED 3	O	Converter Red output
75	RED 2	O	Converter Red output
76	RED 1	O	Converter Red output
77	RED 0	O	Converter Red output
78	VDD	–	Power supply (3.3V)
79	VDD	–	Power supply (3.3V)
80	GND	–	Ground

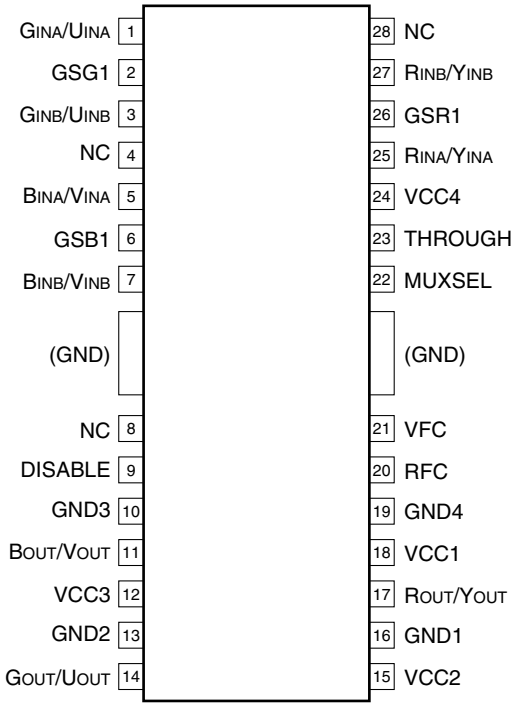
■ SM5301BS (MR MAIN BOARD ASSY : IC6601)

• Video Filter

● Block Diagram



● Pin Arrangement (Top view)



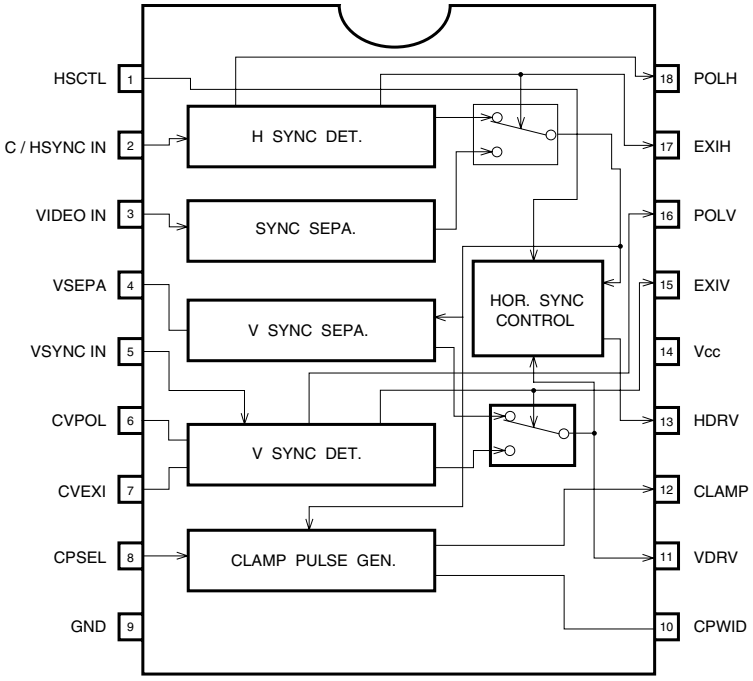
● Pin Function

No.	Pin Name	I/O	Pin Function
1	GINA/UINA	I	Analog GINA or UINA signal input. Sync signal is input on SYNCIN pin.
2	GSG1	I	GOUT/UOUT output buffer gain set input
3	GINB/UINB	I	Analog GINB or UINB signal input. Sync signal is input on SYNCIN pin.
4	(NC)	–	No connection
5	BINA/VINA	I	Analog BINA or VINA signal input. Sync signal is input on SYNCIN pin.
6	GSB1	I	BOUT/VOUT output buffer gain set input
7	BINB/VINB	I	Analog BINB or VINB signal input. Sync signal is input on SYNCIN pin.
8	(NC)	–	No connection
9	DISABLE	I	Power save function. Built-in pull-down resistor. L : Enable H : Disable (Output pins: ROUT/YOUT, GOUT/UOUT, and BOUT/VOUT are high impedance.)
10	GND3	–	Analog ground
11	BOUT/VOUT	O	B/V signal output
12	VCC3	–	Analog 5V supply
13	GND2	–	Analog ground
14	GOUT/UOUT	O	G/U signal output
15	VCC2	–	Analog 5V supply
16	GND1	–	Analog ground
17	ROUT/YOUT	O	R/Y signal output
18	VCC1	–	Analog 5V supply
19	GND4	–	Analog ground
20	RFC	–	LPF (lowpass filter) cutoff frequency setting resistor connection
21	VFC	I	LPF (lowpass filter) cutoff frequency setting voltage input
22	MUXSEL	I	Input select signal. Built-in pull-down resistor. L : XINA pin select H : XINB pin select
23	THROUGH	I	Filter through Built-in pull-down resistor. L : Filter function H : Filter through (buffer only)
24	VCC4	–	Analog 5V supply
25	RINA/YINA	I	Analog RINA or YINA signal input. Sync signal is input on SYNCIN pin.
26	GSR1	I	ROUT/YOUT output buffer gain set input
27	RINB/YINB	I	Analog RINB or YINB signal input. Sync signal is input on SYNCIN pin.
28	(NC)	–	No connection

■ BA7078AF (MR MAIN BOARD ASSY : IC6604)

• Multimedia IC

● Block Diagram



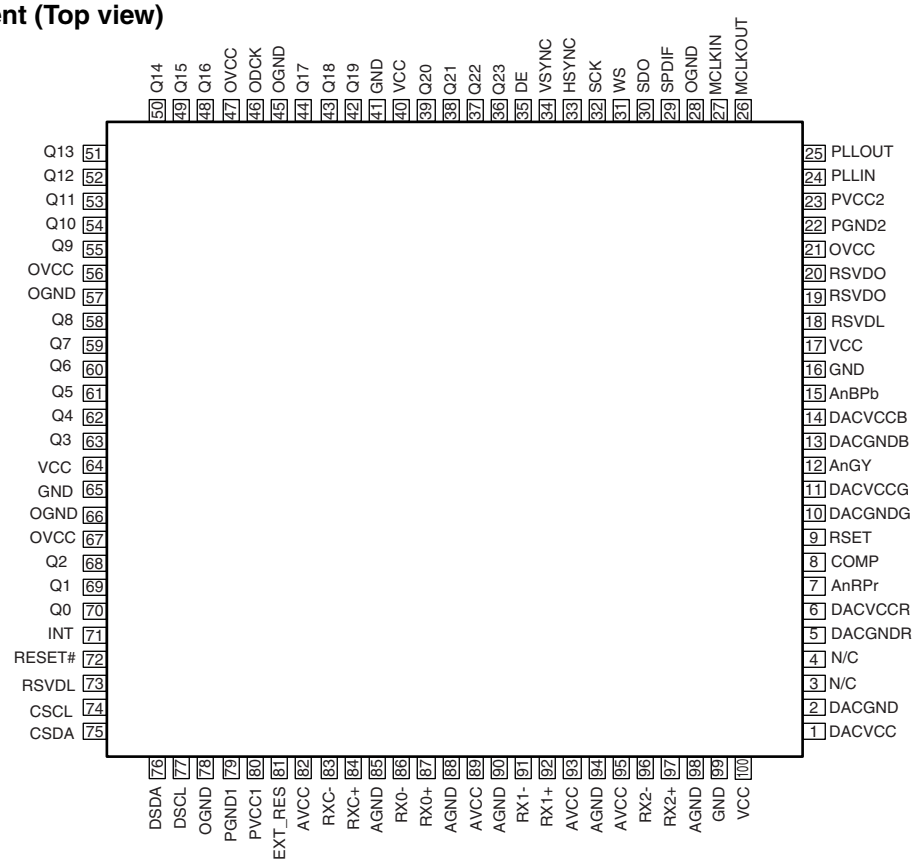
● Pin Function

No.	Pin Name	Pin Function
1	HSCTL	HDRV output Used to select whether to output the VDRV section of the HDRV output signal. High : VDRV section of HDRV is output Low : VDRV section of HDRV is not output
2	C/HSYNC IN	Composite sync / H SYNC input Input either the composite synchronization signal or the horizontal synchronization signal. Input is clamped, and is initiated by capacitor coupling.
3	VIDEO IN	SYNC ON VIDEO input Inputs the SYNC ON VIDEO signal(green). Input is sink chip clamped. Input is initiated by capacitor coupling.
4	VSEPA	f-V conversion Converts the horizontal synchronization signal frequency into a voltage. The voltage generated is proportional to the frequency of the horizontal synchronization signal. Attach a 0.56 μF capacitor between the ground pins.
5	VSYNC IN	V SYNC input Inputs the vertical synchronization signal.
6	CVPOL	Vertical polarity integration Integrates the vertical synchronization signal polarity detection circuit. Attach a 1.5 μF capacitor between this pin and the ground.
7	CVEXI	Vertical existence integration Integrates the vertical synchronization signal existence detection circuit. Attach a 1 μF capacitor between this pin and the ground.
8	CPSEL	Setting the clamp position Used to set the clamp pulse generation position to either the front or back edge of HSYNC High : The front edge is the generation position Open : Composite / H SYNC IN : The front edge is the generation position VIDEO IN : The back edge is the generation position Low : The back edge is the generation position
9	GND	Ground
10	CPWID	Setting the clamp pulse width Sets the clamp pulse width according to the attached time constant. Attach a resistor between this pin and VCC and, a capacitor between this pin and GND. When R = 3.9kΩ and C = 100pF, pulse width is approximately 400 ns. Set the resistor to register an abnormality at 1kΩ.
11	VDRV	VDRV output Outputs the vertical synchronization signal. The output signal has positive polarity.
12	CLAMP	Clamp output Outputs the clamp pulse generated from the vertical synchronization signal. The output signal has a positive polarity.
13	HDRV	HDRV output Outputs the clamp pulse generated from the horizontal synchronization signal. The output signal has positive polarity.
14	Vcc	Power supply
15	EXIV	Vertical existence output Indecates whether the vertical synchronization signal exists.
16	POLV	Vertical polarity output Indicates the polarity of the vertical synchronization signal.
17	EXIH	Horizontal existence output Indicates whether the horizontal synchronization signal exists.
18	POLH	Horizontal polarity output Indicates the polarity of the horizontal synchronization signal.

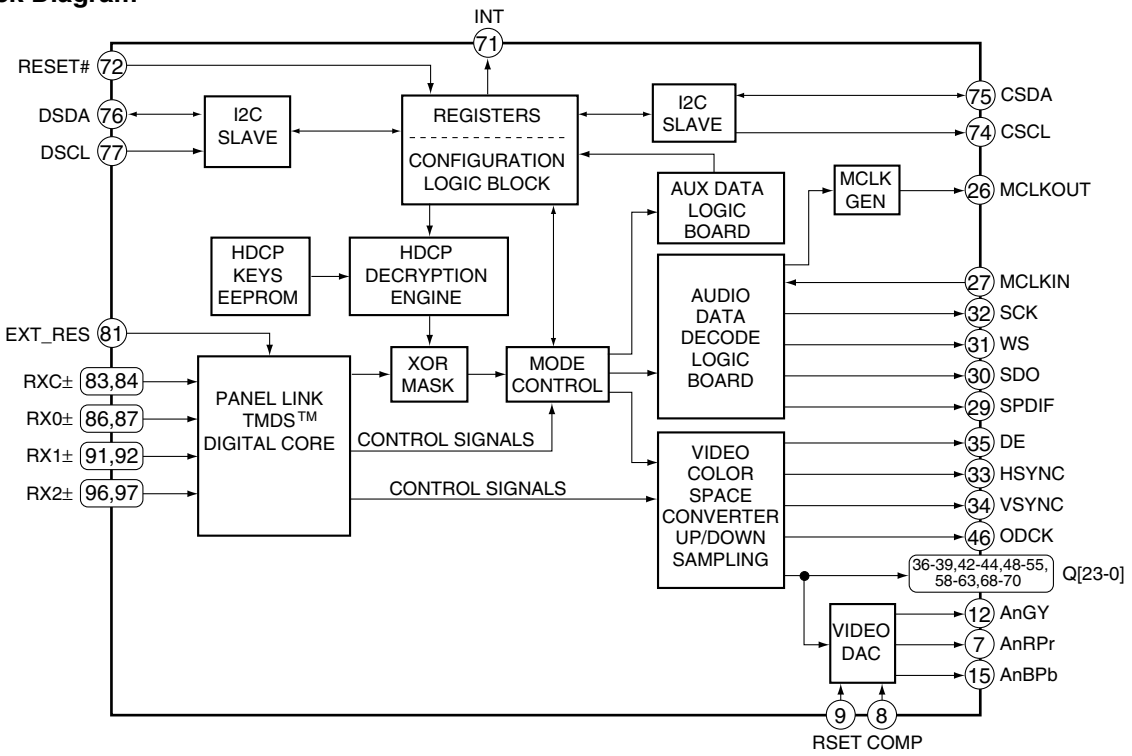
■ Sil9993CTG100 (MR MAIN BOARD ASSY : IC6881)

• HDCP Panel Link Receiver

● Pin Arrangement (Top view)



● Block Diagram



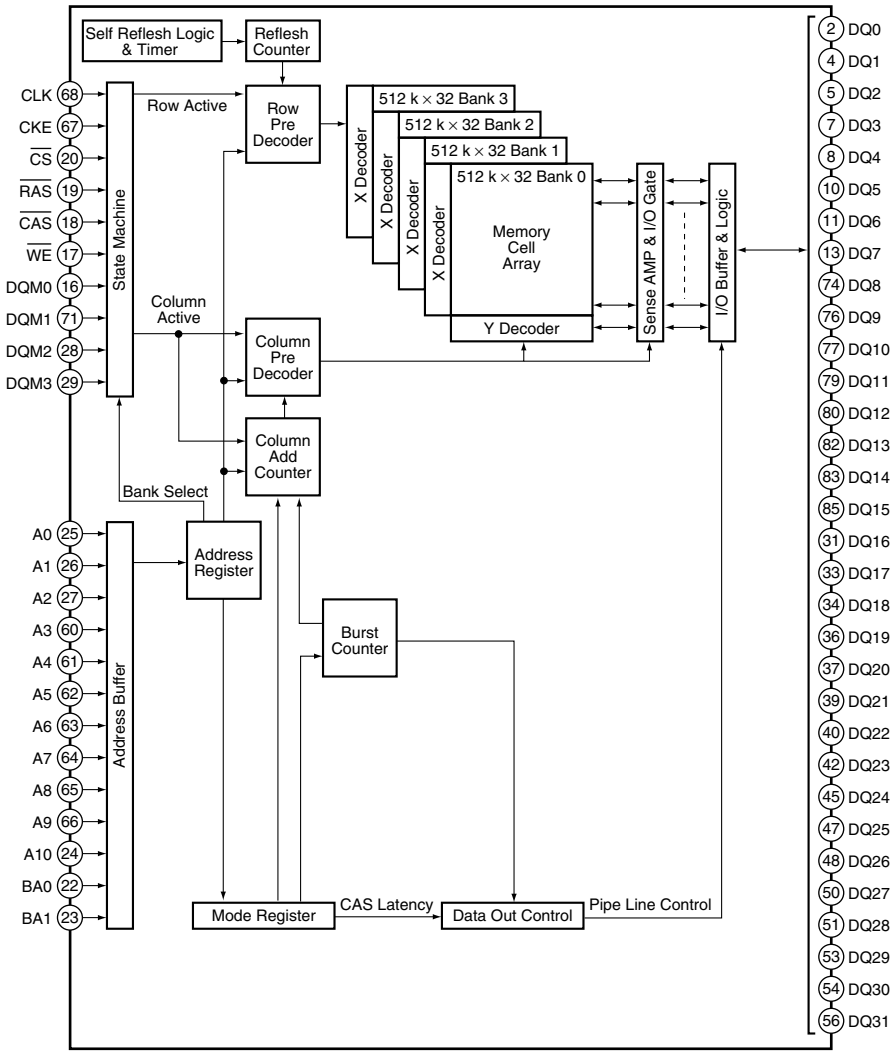
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	DACVCC	–	DAC power supply (3.3V)	51	Q13	O	24-bit output pixel data bus
2	DACGND	–	DAC ground	52	Q12	O	24-bit output pixel data bus
3	N/C	–	No connection	53	Q11	O	24-bit output pixel data bus
4	N/C	–	No connection	54	Q10	O	24-bit output pixel data bus
5	DACGNDR	–	DAC Red ground	55	Q9	O	24-bit output pixel data bus
6	DACVCCR	–	DAC Red power supply (3.3V)	56	OVCC	–	Output bus power supply (3.3V)
7	AnRPr	O	Red, Pr output of analog video	57	OGND	–	Output bus ground
8	COMP	I	For reference amp. correction of DAC inside	58	Q8	O	24-bit output pixel data bus
9	RSET	I	Full scale adjustment resistor input	59	Q7	O	24-bit output pixel data bus
10	DACGNDG	–	DAC Green ground	60	Q6	O	24-bit output pixel data bus
11	DACVCCG	–	DAC Green power supply (3.3V)	61	Q5	O	24-bit output pixel data bus
12	AnGY	O	Green, Y output of analog video	62	Q4	O	24-bit output pixel data bus
13	DACGNDB	–	DAC Blue ground	63	Q3	O	24-bit output pixel data bus
14	DACVCCB	–	DAC Blue power supply (3.3V)	64	VCC	–	Digital power supply (3.3V)
15	AnBPb	O	Blue, Pb output of analog video	65	GND	–	Digital ground
16	GND	–	Digital ground	66	OGND	–	Output bus ground
17	VCC	–	Digital power supply (3.3V)	67	OVCC	–	Output bus power supply (3.3V)
18	RSVDL	I	Reserved Fixed to low.	68	Q2	O	24-bit output pixel data bus
19	RSVDD	O	Reserved No connection	69	Q1	O	24-bit output pixel data bus
20	RSVDD	O	Reserved No connection	70	Q0	O	24-bit output pixel data bus
21	OVCC	–	Output bus power supply (3.3V)	71	INT	O	Interruption output
22	PGND2	–	Audio PLL ground	72	RESET#	I	Reset Activ low.
23	PVCC2	–	Audio PLL power supply (3.3V)	73	RSVDL	I	Reserved Fixed to low.
24	PLLIN	I/O	PLL filter input	74	CSCL	I	Configuration I2C clock
25	PLLOUT	I/O	PLL filter output	75	CSDA	I/O	Configuration I2C data
26	MCCLKOUT	O	Audio master clock output	76	DSDA	I/O	DDC I2C data
27	MCCLKIN	I	Reference audio master clock input	77	DSCL	I	DDC I2C clock
28	OGND	–	Output bus ground	78	OGND	–	Output bus ground
29	SPDIF	O	SPDIF audio output	79	PGND1	–	PLL ground
30	SDO	O	I2S serial data output	80	PVCC1	–	PLL power supply (3.3V)
31	WS	O	I2S word selecting output	81	EXT_RES	I	Input impedance adjustment
32	SCK	O	I2S serial clock output	82	AVCC	–	Analog power supply (3.3V)
33	HSYNC	O	Horizontal sync. control signal output	83	RXC-	I	TMDS data input
34	VSYNC	O	Vertical sync. control signal output	84	RXC+	I	TMDS data input
35	DE	O	Data enable	85	AGND	–	Analog ground
36	Q23	O	24-bit output pixel data bus	86	RX0-	I	TMDS data input
37	Q22	O	24-bit output pixel data bus	87	RX0+	I	TMDS data input
38	Q21	O	24-bit output pixel data bus	88	AGND	–	Analog ground
39	Q20	O	24-bit output pixel data bus	89	AVCC	–	Analog power supply (3.3V)
40	VCC	–	Digital power supply (3.3V)	90	AGND	–	Analog ground
41	GND	–	Digital ground	91	RX1-	I	TMDS data input
42	Q19	O	24-bit output pixel data bus	92	RX1+	I	TMDS data input
43	Q18	O	24-bit output pixel data bus	93	AVCC	–	Analog power supply (3.3V)
44	Q17	O	24-bit output pixel data bus	94	AGND	–	Analog ground
45	OGND	–	Output bus ground	95	AVCC	–	Analog power supply (3.3V)
46	ODCK	O	Data clock output	96	RX2-	I	TMDS data input
47	OVCC	–	Output bus power supply (3.3V)	97	RX2+	I	TMDS data input
48	Q16	O	24-bit output pixel data bus	98	AGND	–	Analog ground
49	Q15	O	24-bit output pixel data bus	99	GND	–	Digital ground
50	Q14	O	24-bit output pixel data bus	100	VCC	–	Digital power supply (3.3V)

■ HY57V643220CT-7 (MR MAIN BOARD ASSY : IC7001, IC7002)

• Synchronous DRAM

● Block Diagram



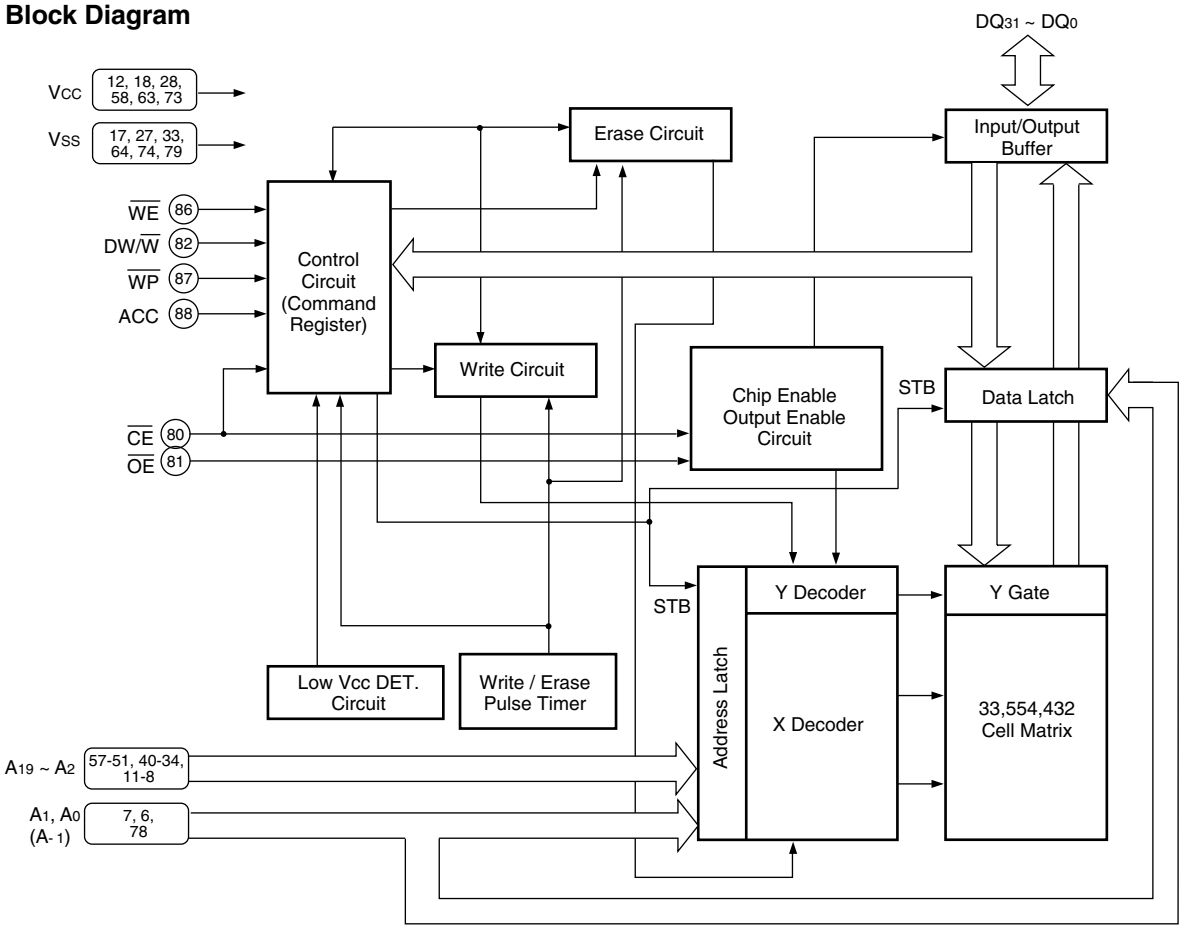
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply	44	VSS	–	Ground
2	DQ0	I/O	Data input/output	45	DQ24	I/O	Data input/output
3	VDDQ	–	Power supply for output buffer	46	VSSQ	–	Ground for output buffer
4	DQ1	I/O	Data input/output	47	DQ25	I/O	Data input/output
5	DQ2	I/O	Data input/output	48	DQ26	I/O	Data input/output
6	VSSQ	–	Ground for output buffer	49	VDDQ	–	Power supply for output buffer
7	DQ3	I/O	Data input/output	50	DQ27	I/O	Data input/output
8	DQ4	I/O	Data input/output	51	DQ28	I/O	Data input/output
9	VDDQ	–	Power supply for output buffer	52	VSSQ	–	Ground for output buffer
10	DQ5	I/O	Data input/output	53	DQ29	I/O	Data input/output
11	DQ6	I/O	Data input/output	54	DQ30	I/O	Data input/output
12	VSSQ	–	Ground for output buffer	55	VDDQ	–	Power supply for output buffer
13	DQ7	I/O	Data input/output	56	DQ31	I/O	Data input/output
14	NC	–	No connection	57	NC	–	No connection
15	VDD	–	Power supply	58	VSS	–	Ground
16	DQM0	I	Data input/output mask	59	DQM3	I	Data input/output mask
17	/WE	I	Write enable	60	A3	I	Address input
18	/CAS	I	Column address strobe	61	A4	I	Address input
19	/RAS	I	Row address strobe	62	A5	I	Address input
20	/CS	I	Chip select input	63	A6	I	Address input
21	NC	–	No connection	64	A7	I	Address input
22	BA0	I	Bank address input	65	A8	I	Address input
23	BA1	I	Bank address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	NC	–	No connection
27	A2	I	Address input	70	NC	–	No connection
28	DQM2	I	Data input/output mask	71	DQM1	I	Data input/output mask
29	VDD	–	Power supply	72	VSS	–	Ground
30	NC	–	No connection	73	NC	–	No connection
31	DQ16	I/O	Data input/output	74	DQ8	I/O	Data input/output
32	VSSQ	–	Ground for output buffer	75	VDDQ	–	Power supply for output buffer
33	DQ17	I/O	Data input/output	76	DQ9	I/O	Data input/output
34	DQ18	I/O	Data input/output	77	DQ10	I/O	Data input/output
35	VDDQ	–	Power supply for output buffer	78	VSSQ	–	Ground for output buffer
36	DQ19	I/O	Data input/output	79	DQ11	I/O	Data input/output
37	DQ20	I/O	Data input/output	80	DQ12	I/O	Data input/output
38	VSSQ	–	Ground for output buffer	81	VDDQ	–	Power supply for output buffer
39	DQ21	I/O	Data input/output	82	DQ13	I/O	Data input/output
40	DQ22	I/O	Data input/output	83	DQ14	I/O	Data input/output
41	VDDQ	–	Power supply for output buffer	84	VSSQ	–	Ground for output buffer
42	DQ23	I/O	Data input/output	85	DQ15	I/O	Data input/output
43	VDD	–	Power supply	86	VSS	–	Ground

■ MBM29PL3200BE70PFV (MR MAIN BOARD ASSY : IC7152)

• Page Mode Flash Memory

● Block Diagram



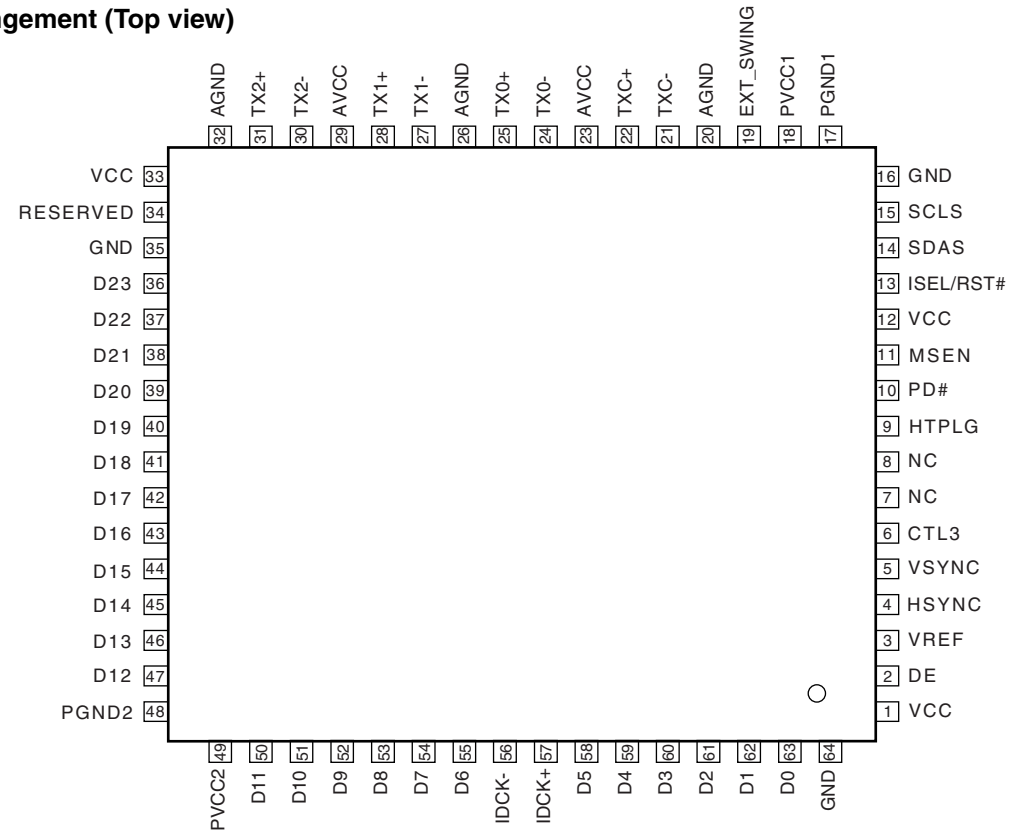
● Pin Function

No.	Pin Name	I/O	Pin Function
57-51, 40-34, 11-6, 78	A_{19} - A_0, A_{-1}	I	Address input
78-75, 72-65, 62-59, 32-19, 26-19, 16-13	DQ_{31} - DQ_0	I/O	Data input/output
80	CE	I	Chip enable
81	OE	I	Output enable
86	WE	I	Write enable
82	DW/W	I	16 bit, 32 bit mode switch
87	WP	I	Write protect
88	ACC	I	Acceleration
17, 27, 33, 64, 74, 79	V_{SS}	–	Ground
12, 18, 28, 58, 63, 73	V_{CC}	–	Power supply
1-5, 41-50, 83-85, 89, 90	N.C.	–	No connection

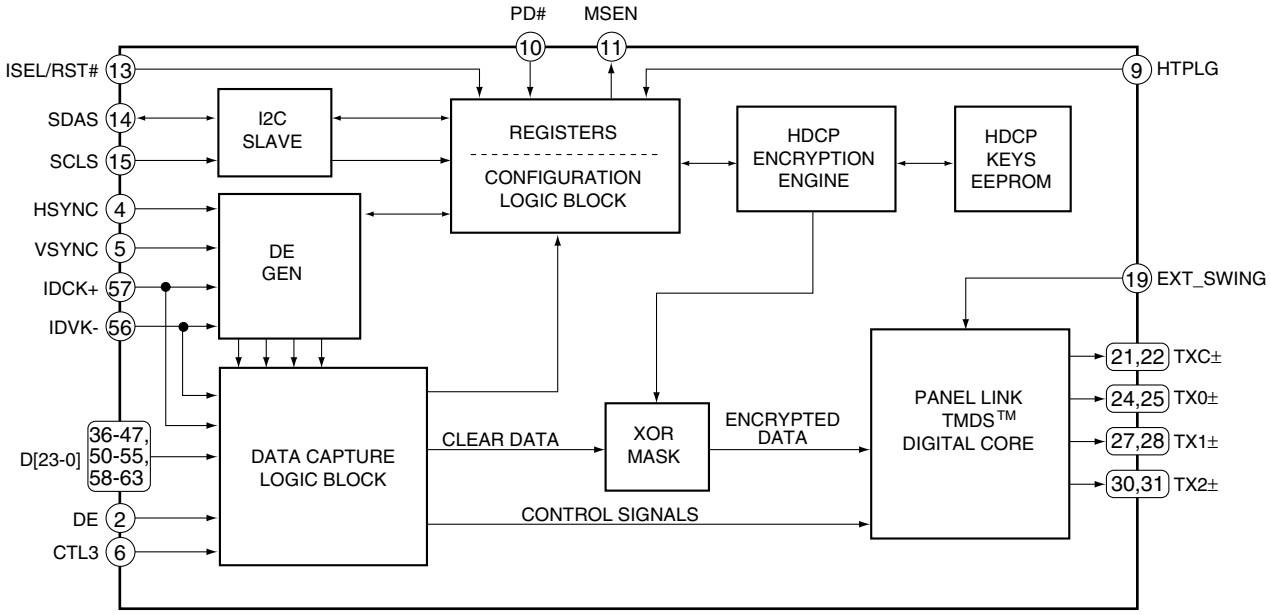
■ SiI170BCLG64 (MR MAIN BOARD ASSY : IC7401)

• HDCP Panel Link Transmitter

● Pin Arrangement (Top view)



● Block Diagram



● **Pin Function**

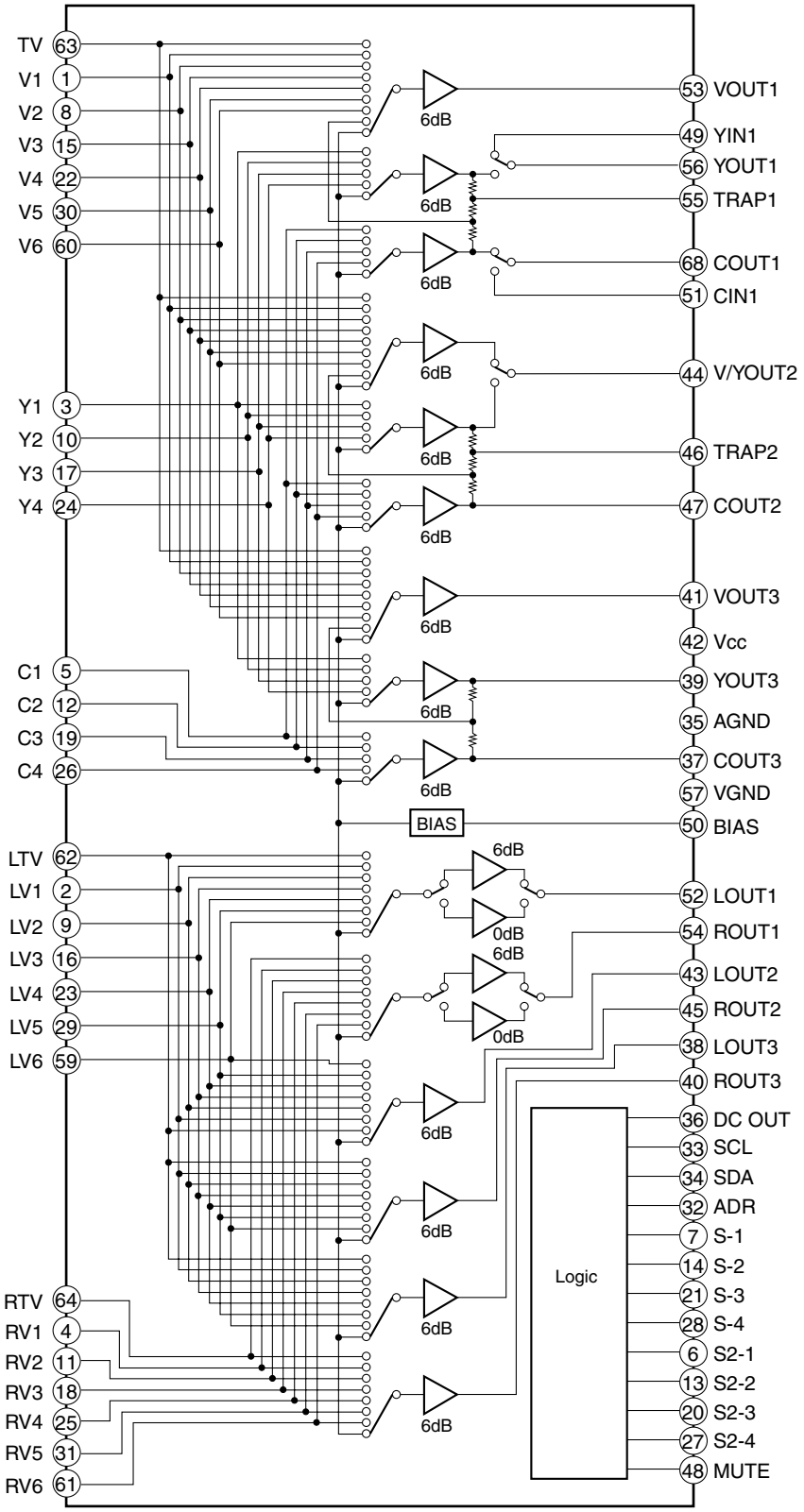
No.	Pin Name	I/O	Pin Function
1	VCC	–	Digital power supply (3.3V)
2	DE	I	Data enable
3	VREF	I	3.3V fixed
4	HSYNC	I	Horizontal sync. control signal input
5	VSYNC	I	Vertical sync. control signal input
6	CTL3	I	External CTL3 input
7	NC	–	No connection
8	NC	–	No connection
9	HTPLG	I	Monitor chrage input
10	PD#	I	Power down input (Active low)
11	MSEN	O	Monitor sense output (open-collector output)
12	VCC	–	Digital power supply (3.3V)
13	ISEL/RST#	I	I2C interface selecting input High: I2C interface is active
14	SDAS	I/O	DDC I2C data input/output
15	SCLS	I	DDC I2C clock input
16	GND	–	Digital ground
17	PGND1	–	PLL analog ground
18	PVCC1	–	Analog power supply for PLL of primary side (3.3V)
19	EXT_SWING	I	Voltage regulation adjustment
20	AGND	–	Analog ground
21	TXC-	O	Differential signal clock output of TMDS Low voltage
22	TXC+	O	Differential signal clock output of TMDS Low voltage
23	AVCC	–	Analog power supply (3.3V)
24	TX0-	O	Differential signal clock output of TMDS Low voltage
25	TX0+	O	Differential signal clock output of TMDS Low voltage
26	AGND	–	Analog ground
27	TX1-	O	Differential signal clock output of TMDS Low voltage
28	TX1+	O	Differential signal clock output of TMDS Low voltage
29	AVCC	–	Analog power supply (3.3V)
30	TX2-	O	Differential signal clock output of TMDS Low voltage
31	TX2+	O	Differential signal clock output of TMDS Low voltage
32	AGND	–	Analog ground
33	VCC	–	Digital power supply (3.3V)
34	RESERVED	I	Reserved pin for Silicon Image Normally, fixed to low.
35	GND	–	Digital ground
36	D23	I	24-bit pixel bus input
37	D22	I	24-bit pixel bus input
38	D21	I	24-bit pixel bus input
39	D20	I	24-bit pixel bus input
40	D19	I	24-bit pixel bus input
41	D18	I	24-bit pixel bus input
42	D17	I	24-bit pixel bus input
43	D16	I	24-bit pixel bus input
44	D15	I	24-bit pixel bus input
45	D14	I	24-bit pixel bus input

No.	Pin Name	I/O	Pin Function
46	D13	I	24-bit pixel bus input
47	D12	I	24-bit pixel bus input
48	PGND2	–	PLL analog ground
49	PVCC2	–	Analog power supply for filter PLL (3.3V)
50	D11	I	24-bit / 12-bit pixel bus input
51	D10	I	24-bit / 12-bit pixel bus input
52	D9	I	24-bit / 12-bit pixel bus input
53	D8	I	24-bit / 12-bit pixel bus input
54	D7	I	24-bit / 12-bit pixel bus input
55	D6	I	24-bit / 12-bit pixel bus input
56	IDCK-	I	Data clock - input
57	IDCK+	I	Data clock + input
58	D5	I	24-bit / 12-bit pixel bus input
59	D4	I	24-bit / 12-bit pixel bus input
60	D3	I	24-bit / 12-bit pixel bus input
61	D2	I	24-bit / 12-bit pixel bus input
62	D1	I	24-bit / 12-bit pixel bus input
63	D0	I	24-bit / 12-bit pixel bus input
64	GND	–	Digital ground

■ CXA2069Q (AV BOARD ASSY : IC8002)

• 7-Input 3-Output Audio/Video Switch

● Block Diagram



● **Pin Function**

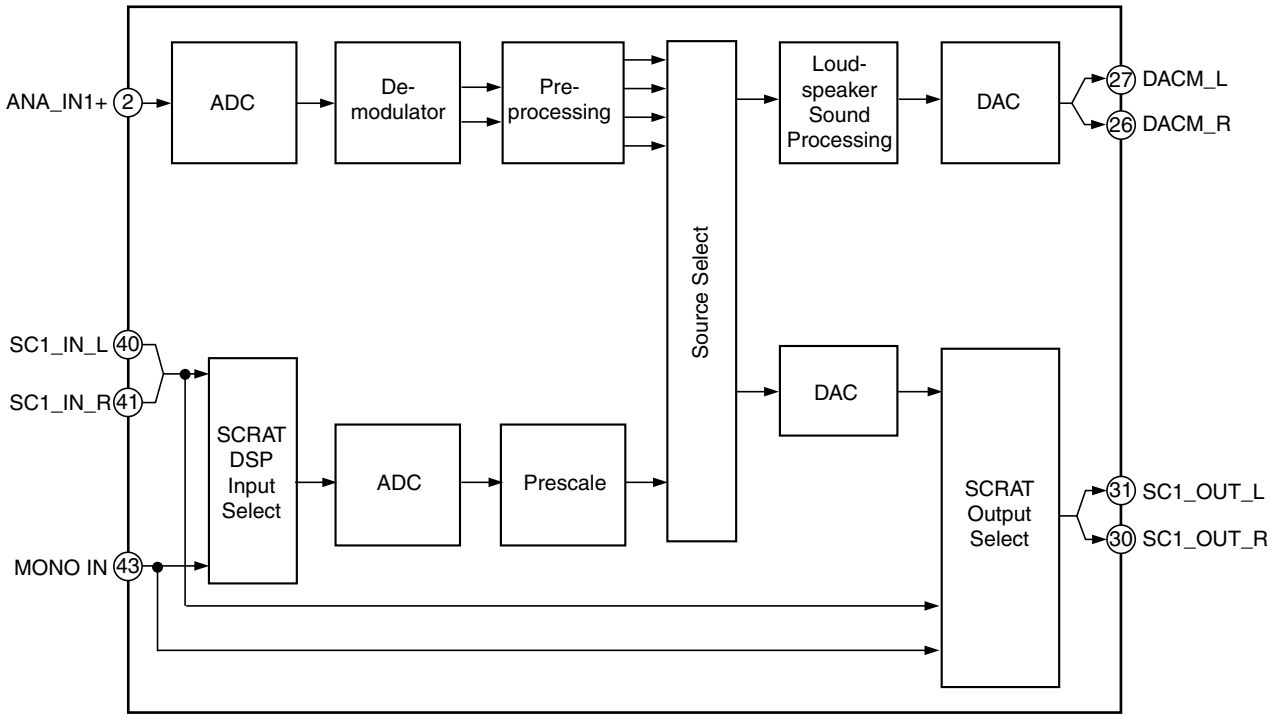
No.	Pin Name	I/O	Pin Function
63 1 8 15 22 30 60	TV V1 V2 V3 V4 V5 V6	I	Video signal inputs. Input composite video signals.
3 10 17 24 49	Y1 Y2 Y3 Y4 YIN1	I	Y/C separation signal inputs. Input luminance signals. The YIN1 pin inputs the signal obtained by Y/C separating the VOUT1 pin output.
5 12 19 26 51	C1 C2 C3 C4 CIN1	I	Y/C separation signal inputs. Input chrominance signals. The CIN1 pin inputs the signal obtained by Y/C separating the VOUT1 pin output.
62, 2 9, 16 23, 29 59, 64 4, 11 18, 25 31, 61	LTV, LV1 LV2, LV3 LV4, LV5 LV6, RTV RV1, RV2 RV3, RV4 RV5, RV6	I	Audio signal inputs.
53 41	VOUT1 VOUT3	O	Video signal outputs. Output composite video signals.
44	V/YOUT2	O	Video signal output. Either composite video signal output or luminance signal output can be selected by I2C bus control.
56 39	YOUT1 YOUT3	O	Video signal outputs. Output luminance signals.
58 47 37	COUT1 COUT2 COUT3	O	Video signal outputs. Output chrominance signals.
52 43 38 54 45 40	LOUT1 LOUT2 LOUT3 ROUT1 ROUT2 ROUT3	O	Audio signal outputs. Zo=50 ohm (within DC ± 2mA)
6 13 20 27	S2-1 S2-2 S2-3 S2-4	–	Detects the S2-compatible DC superimposed onto the C signal. 4 : 3 video signal at 1.3 V or less 4 : 3 letter-box signal at 1.3 V or more to 2.5 V or less 16 : 9 picture squeezed signal at 2.5 V or more This pin is pulled down to GND by a 100 k ohm resistor, so the 4 : 3 video signal is selected when open.

No.	Pin Name	I/O	Pin Function
7 14 21 28	S-1 S-2 S-3 S-4	–	Composite video/S selector. The detection results are written to the status register. S signal at 3.5 V or less. Composite video signal at 3.5 V or more. This pin is pulled up to 5 V by a 100 k ohm resistor, so the composite video signal is selected when open.
32	ADR	–	Selects the slave address for the I2C bus. 90H at 1.5 V or less 92H at 2.5 V or more 90H when open.
33	SCL	I	I2C bus signal input VILmax=1.5 V VIHmin=3.0 V
34	SDA	I	I2C bus signal input VILmax=1.5 V VIHmin=3.0 V VOLmax=0.4 V
36	DC_OUT	O	Outputs the S2-compatible DC superimposed onto the COUT3 output. The DC is superimposed by connecting this pin to the COUT3 output via a capacitor. Control is performed by the I2C bus. When 0 V is output, Q1 is ON and the impedance is 5 k ohm. S2 protocol output impedance of 10 ± 3 k ohm is realized by attaching external resistance of 4.7 k ohm. DC_OUT (bus) Output DC 0 4.5 V 1 0 V 2 1.9 V 3 4.5 V
55 46	TRAP1 TRAP2	–	Connects trap circuit for subcarrier.
48	MUTE	–	Audio signal output mute. Mute OFF at 1.5 V or less Mute ON at 2.5 V or more Mute OFF when open.
50	BIAS	–	Internal reference bias (VCC/2). Connect to GND via a capacitor.

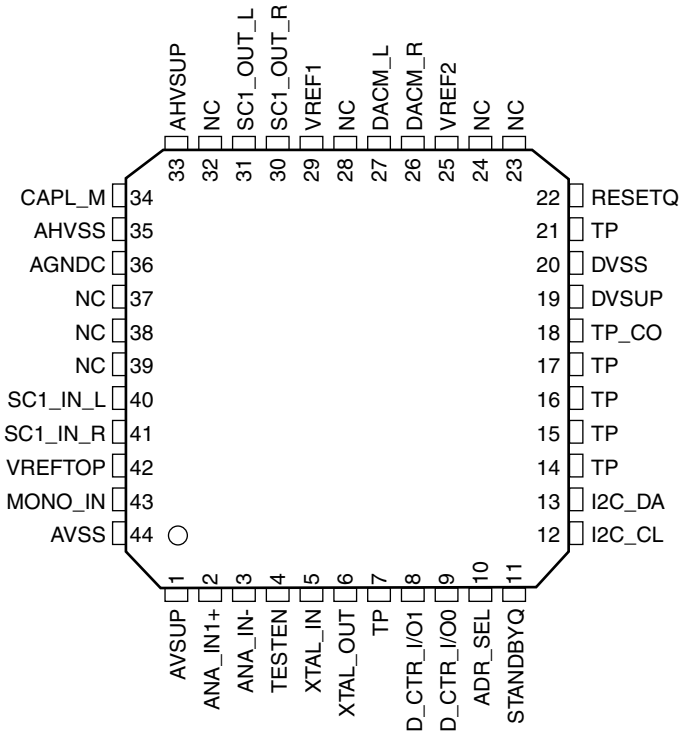
■ MSP3455G (AV BOARD ASSY : IC7502)

• Multisound Processor

● Block Diagram



● Pin Arrangement (Top view)



● Pin Function

NC = Not connected; leave vacant
LV = if not used, leave vacant
DVSS: if not used, connect to DVSS

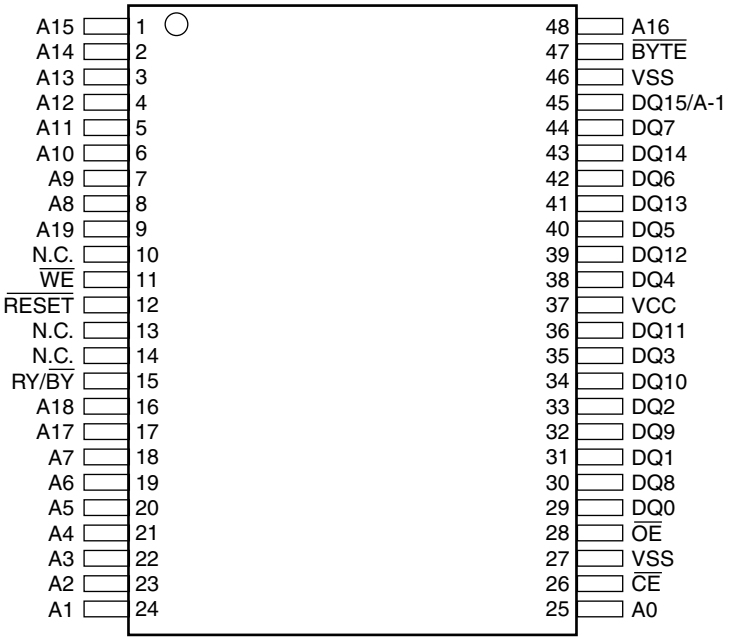
X = obligatory; connect as described in circuit diagram
AHVSS: connect to AHVSS

No.	Pin Name	Type	Connection (it not used)	Descriptiom
1	AVSUP		X	Analog power supply +5V
2	ANA_IN1+	IN	LV	IF input1
3	ANA_IN-	IN	LV	IF common
4	TESTEN	IN	X	Test pin
5	XTAL_IN	IN	X	Crystal oscillator
6	XTAL_OUT	OUT	X	Crystal oscillator
7	TP		LV	Test pin
8	D_CTR_I/O_1	IN/OUT	LV	D_CTR_I/O_1
9	D_CTR_I/O_0	IN/OUT	LV	D_CTR_I/O_0
10	ADR_SEL	IN	X	I2C Bus address select
11	STANDBYQ	IN	X	Standby (low-active)
12	I2C_CL	IN/OUT	X	I2C clock
13	I2C_DA	IN/OUT	X	I2C data
14	TP		LV	Test pin
15	TP		LV	Test pin
16	TP		LV	Test pin
17	TP		LV	Test pin
18	TP_CO	OUT	LV	Test pin
19	DVSUP		X	Digital power supply +5V
20	DVSS		X	Digital ground
21	TP		LV	Test pin
22	RESETQ	IN	X	Power-on-reset
23	NC		LV	Not connected
24	NC		LV	Not connected
25	VREF2		X	Reference ground 2 high-voltage part
26	DACM_R	OUT	LV	Loudspeaker out, right
27	DACM_L	OUT	LV	Loudspeaker out, left
28	NC		LV	Not connected
29	VREF1		X	Reference ground 1 high-voltage part
30	SC1_OUT_R	OUT	LV	SCRAT 1 output, right
31	SC1_OUT_L	OUT	LV	SCRAT 1 output, left
32	NC		LV	Not connected
33	AHVSUP		X	Analog power supply + 8.0 V
34	CAPL_M		X	Volume capacitor MAIN
35	AHVSS		X	Analog ground
36	AGNDC		X	Analog reference voltage high-voltage part
37	NC		LV	Not connected
38	NC		LV	Not connected
39	NC		LV	Not connected
40	SC1_IN_L	IN	LV	SCRAT 1 input, left
41	SC1_IN_R	IN	LV	SCRAT 1 input, right
42	VREFTOP		X	Reference voltage IF A/D converter
43	MONO_IN	IN	LV	Mono input
44	AVSS		X	Analog ground

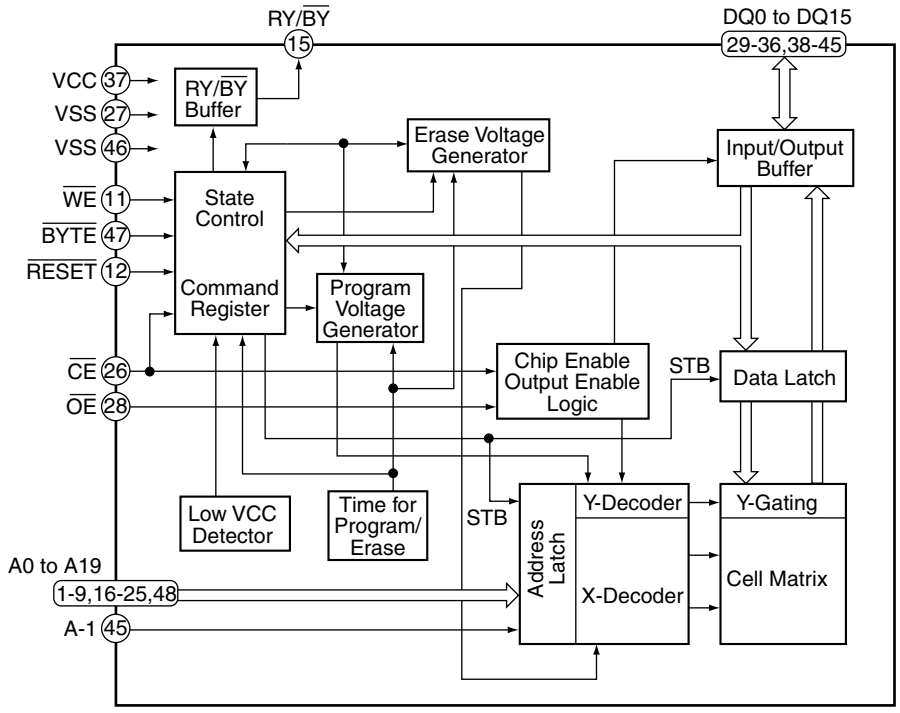
■ MBM29LV160TE-90PFTN (AV BOARD ASSY : IC9101)

• 16Mbit Flash Memory

● Pin Arrangement (Top view)



● Block Diagram



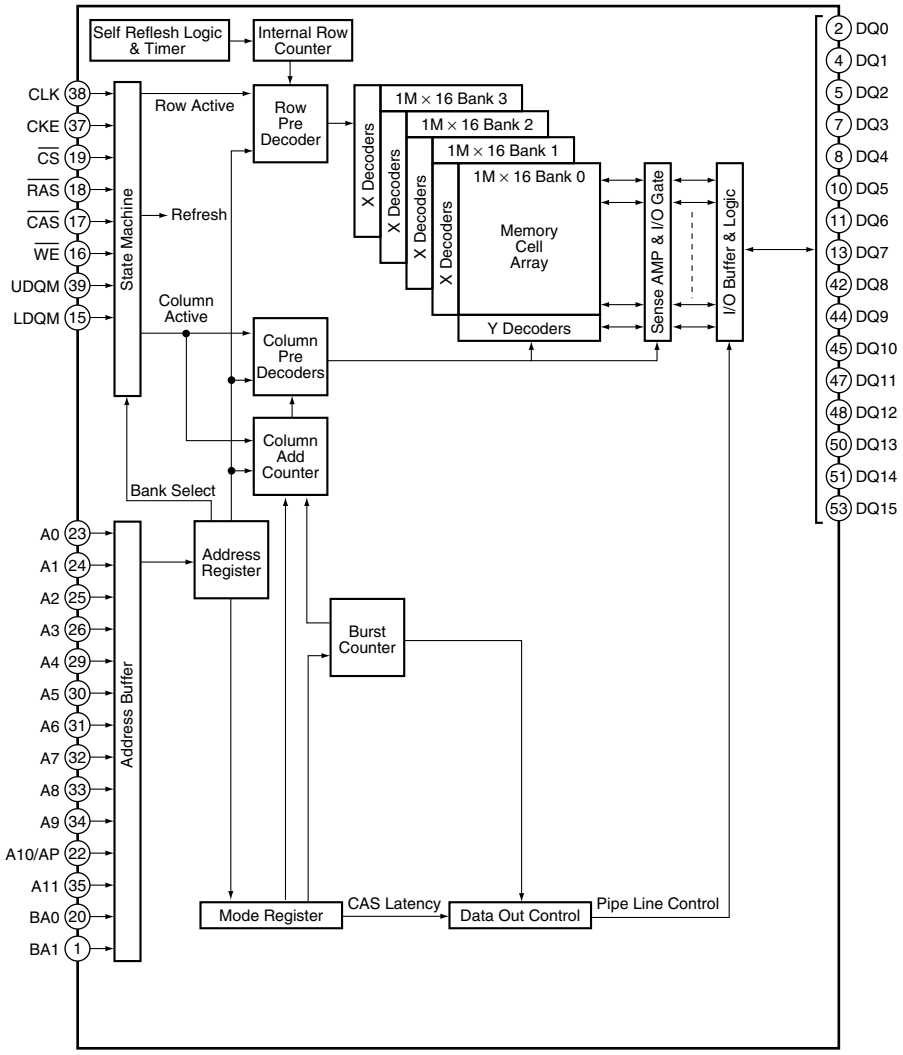
● Pin Function

No.	Pin Name	I/O	Pin Function
1	A15	I	Address input
2	A14	I	Address input
3	A13	I	Address input
4	A12	I	Address input
5	A11	I	Address input
6	A10	I	Address input
7	A9	I	Address input
8	A8	I	Address input
9	A19	I	Address input
10	N.C.	–	Pin not connected internally
11	$\overline{WE}$	I	Write enable
12	$\overline{RESET}$	I	Hardware reset pin / Temporary sector unprotection
13	N.C.	–	Pin not connected internally
14	N.C.	–	Pin not connected internally
15	RY/$\overline{BY}$	O	Ready/Busy output
16	A18	I	Address input
17	A17	I	Address input
18	A7	I	Address input
19	A6	I	Address input
20	A5	I	Address input
21	A4	I	Address input
22	A3	I	Address input
23	A2	I	Address input
24	A1	I	Address input
25	A0	I	Address input
26	$\overline{CE}$	I	Chip enable
27	VSS	–	Ground
28	$\overline{OE}$	I	Output enable
29	DQ0	I/O	Data input/output
30	DQ8	I/O	Data input/output
31	DQ1	I/O	Data input/output
32	DQ9	I/O	Data input/output
33	DQ2	I/O	Data input/output
34	DQ10	I/O	Data input/output
35	DQ3	I/O	Data input/output
36	DQ11	I/O	Data input/output
37	VCC	–	Power supply
38	DQ4	I/O	Data input/output
39	DQ12	I/O	Data input/output
40	DQ5	I/O	Data input/output
41	DQ13	I/O	Data input/output
42	DQ6	I/O	Data input/output
43	DQ14	I/O	Data input/output
44	DQ7	I/O	Data input/output
45	DQ15/A-1	I/O	Data input/output
46	VSS	–	Ground
47	$\overline{BYTE}$	I	Selects 8-bit or 16-bit mode
48	A16	I	Address input

HY57V641620HGT-H (AV BOARD ASSY : IC9104)

• 64M bit (4M × 16) Synchronous DRAM

● Block Diagram



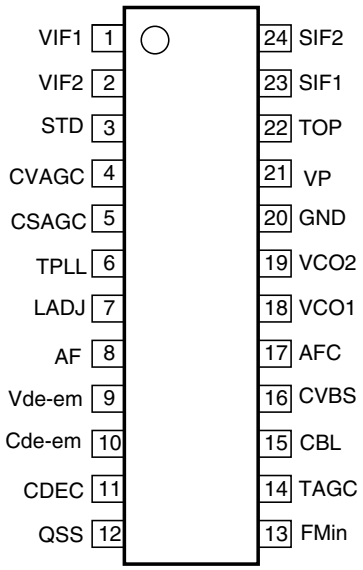
● **Pin Function**

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply	28	VSS	–	Ground
2	DQ0	I/O	Data input/output	29	A4	I	Address input
3	VDDQ	–	Power supply for output buffer	30	A5	I	Address input
4	DQ1	I/O	Data input/output	31	A6	I	Address input
5	DQ2	I/O	Data input/output	32	A7	I	Address input
6	VSSQ	–	Ground for output buffer	33	A8	I	Address input
7	DQ3	I/O	Data input/output	34	A9	I	Address input
8	DQ4	I/O	Data input/output	35	A11	I	Address input
9	VDDQ	–	Power supply for output buffer	36	NC	–	No connection
10	DQ5	I/O	Data input/output	37	CKE	I	Clock enable
11	DQ6	I/O	Data input/output	38	CLK	I	Clock input
12	VSSQ	–	Ground for output buffer	39	UDQM	I/O	Data input/output mask
13	DQ7	I/O	Data input/output	40	NC	–	No connection
14	VDD	–	Power supply	41	VSS	–	Ground
15	LDQM	I/O	Data input/output mask	42	DQ8	I/O	Data input/output
16	/WE	I	Write enable	43	VDDQ	–	Power supply for output buffer
17	/CAS	I	Column address strobe	44	DQ9	I/O	Data input/output
18	/RAS	I	Row address strobe	45	DQ10	I/O	Data input/output
19	/CS	I	Chip select	46	VSSQ	–	Ground for output buffer
20	BA0	I	Bank address input	47	DQ11	I/O	Data input/output
21	BA1	I	Bank address input	48	DQ12	I/O	Data input/output
22	A10/AP	I	Address input	49	VDDQ	–	Power supply for output buffer
23	A0	I	Address input	50	DQ13	I/O	Data input/output
24	A1	I	Address input	51	DQ14	I/O	Data input/output
25	A2	I	Address input	52	VSSQ	–	Ground for output buffer
26	A3	I	Address input	53	DQ15	I/O	Data input/output
27	VDD	–	Power supply	54	VSS	–	Ground

■ TDA9818TS (AV BOARD ASSY : IC7501)

• Single/multistandard VIF/SIF-PLL and FM-PLL/AM Demodulators

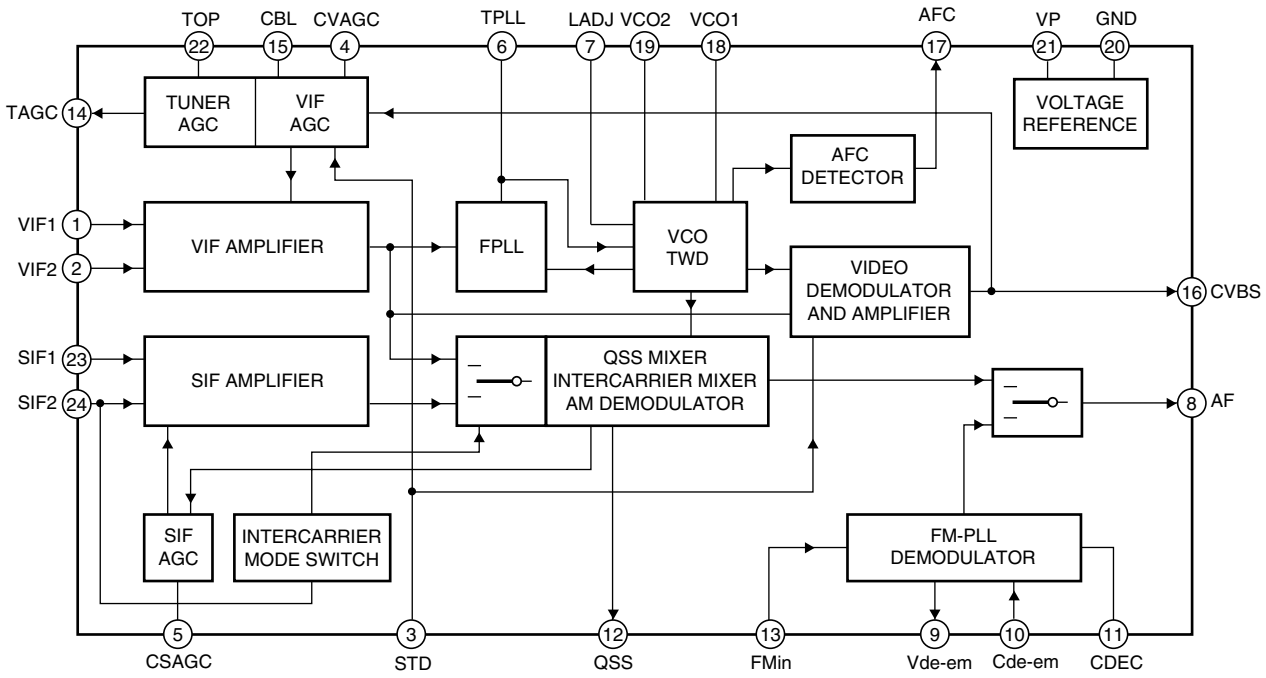
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	VIF1	VIF differential input signal voltage 1
2	VIF2	VIF differential input signal voltage 2
3	STD	Standard selection switch
4	CVAGC	VIF AGC capacitor
5	CSAGC	SIF AGC capacitor
6	TPLL	PLL filter
7	LADJ	L/L accent switch and adjust
8	AF	Audio output
9	Vde-em	De-emphasis output
10	Cde-em	De-emphasis input
11	CDEC	Decoupling capacitor
12	QSS	Single reference QSS/intercarrier output voltage
13	FMin	Sound intercarrier input voltage
14	TAGC	Tuner AGC output
15	CBL	Black level detector
16	CVBS	Composite video output voltage
17	AFC	AFC output
18	VCO1	VCO1 resonance circuit
19	VCO2	VCO2 resonance circuit
20	GND	Ground
21	VP	Supply voltage
22	TOP	Tuner AGC takeover point adjust
23	SIF1	SIF differential input signal voltage 1
24	SIF2	SIF differential input signal voltage 2

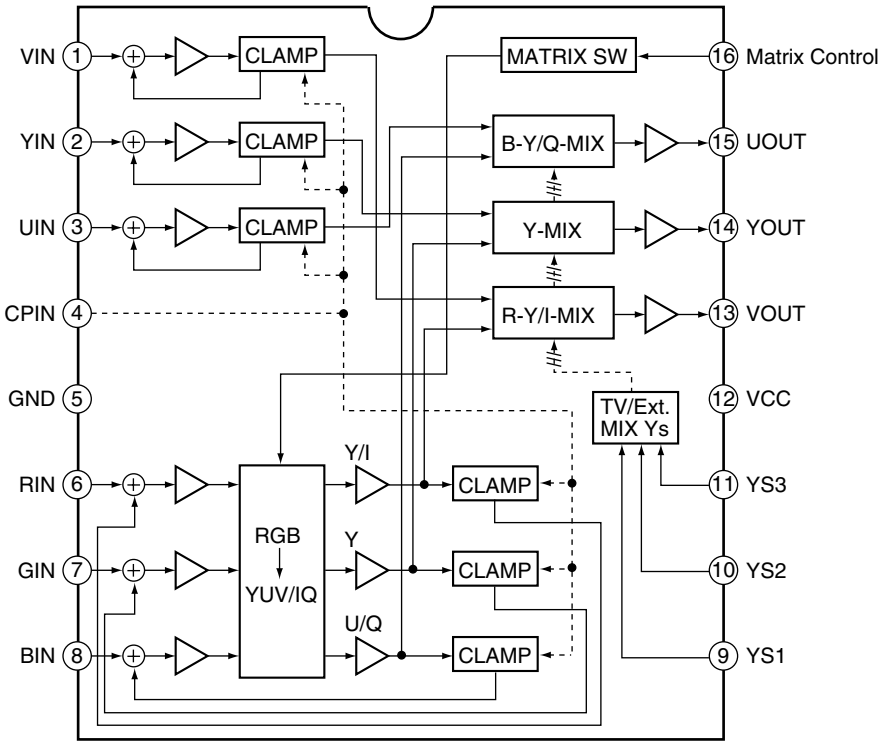
● Block Diagram



■ TA1287FG (AV BOARD ASSY : IC8906)

• RGB to YUV/IQ High-speed Matrix IC

● Block Diagram



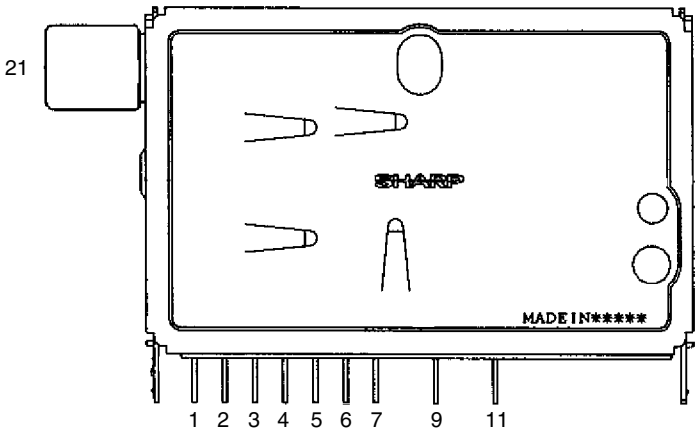
● Pin Function

No.	Pin Name	I/O	Pin Function
1	VIN	I	Input R-Y (V) or R signal through a clamping capacitor.
2	YIN	I	Input Y or G signal through a clamping capacitor.
3	UIN	I	Input B-Y (U) or B signal through a clamping capacitor.
4	CPIN	I	Input clamping pulse. Threshold: 0.75V
5	GND	–	Ground
6	RIN	I	Input R or R-Y (V) signal through a clamping capacitor.
7	GIN	I	Input G or Y signal through a clamping capacitor.
8	BIN	I	Input B or B-Y (U) signal through a clamping capacitor.
9	YS1	I	Select to switch mixing ratio. Threshold: 0.75V
10	YS2	I	Select to switch mixing ratio. Threshold: 0.75V
11	YS3	I	Select to switch mixing ratio. Threshold: 0.75V
12	VCC	–	Power supply 9V
13	VOUT	O	Output R-Y (V) or R signal.
14	YOUT	O	Output Y or G signal.
15	UOUT	O	Output B-Y (U) or B signal.
16	Matrix Control	I	This pin's voltage control the matrix coefficient for output signals. Selects the output mode.

■ AXF1119 (AV BOARD ASSY : U7501)

• TV Tuner

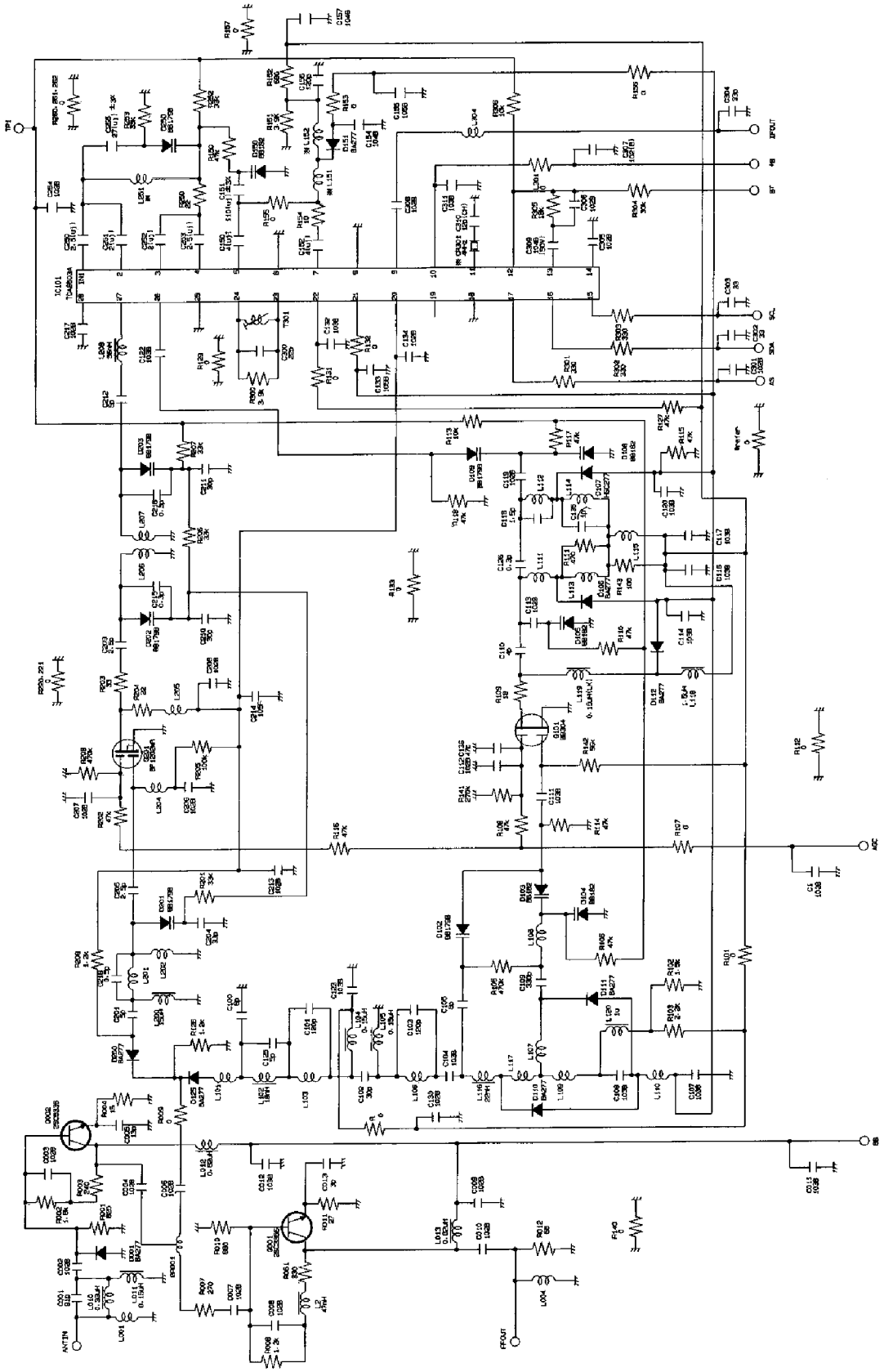
● Pin Arrangement



● Pin Function

No.	Pin Name
1	AGC
2	BB (5V)
3	AS
4	SCL
5	SDA
6	NC
7	+B (5V)
8	-
9	BT (31V)
10	-
11	IF OUT
21	ANT IN

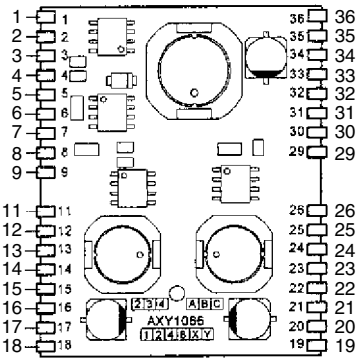
● Schematic Diagram



■ AXY1066 (REG ASSY : U8502)

• DC-DC Converter Unit

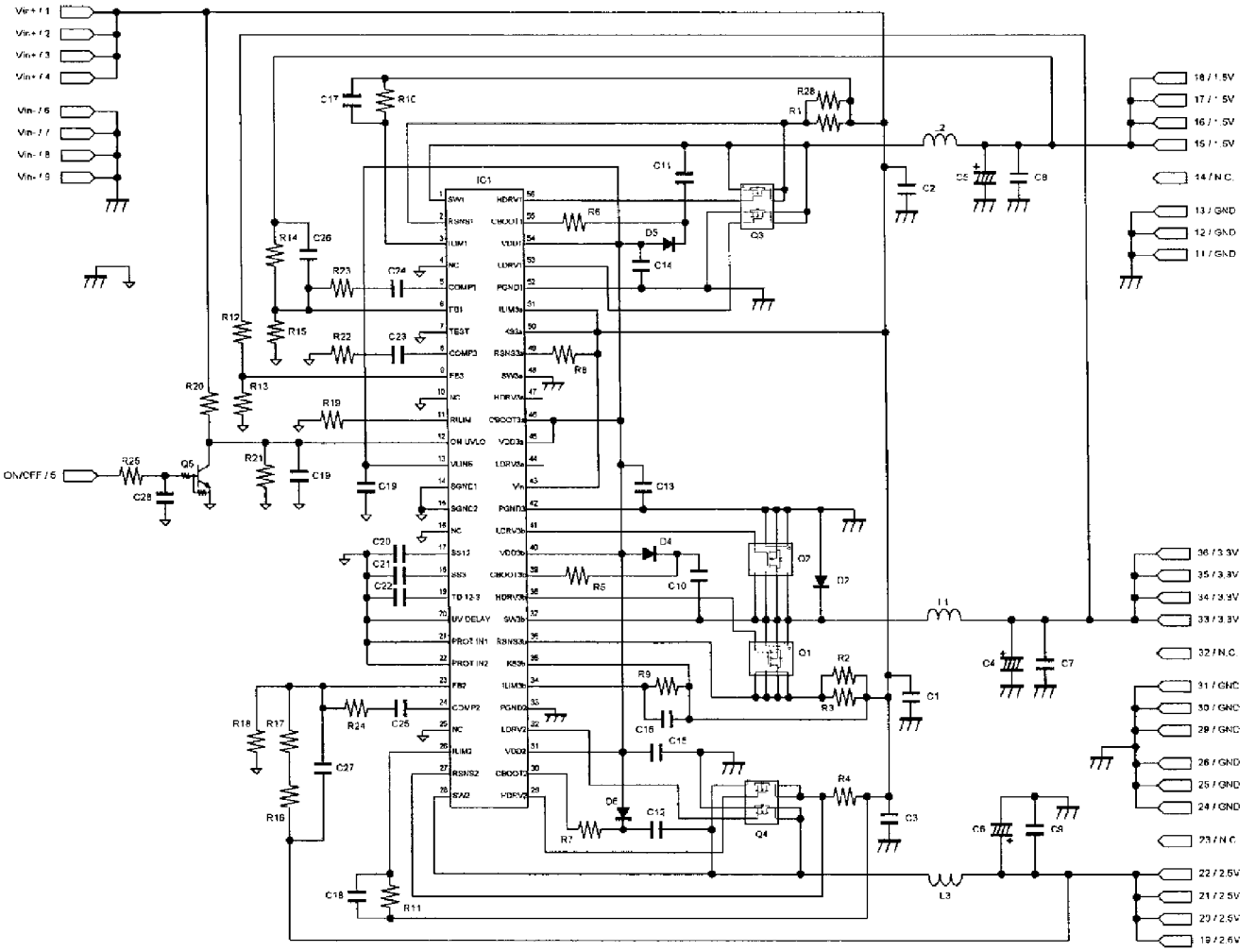
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function	No.	Pin Name	Pin Function
1	Vin	12V input	19	Vo2	2.5V output
2	Vin	12V input	20	Vo2	2.5V output
3	Vin	12V input	21	Vo2	2.5V output
4	Vin	12V input	22	Vo2	2.5V output
5	ON/OFF	Output ON/OFF	23	N.C.	No connection
6	GND	Ground	24	GND	Ground
7	GND	Ground	25	GND	Ground
8	GND	Ground	26	GND	Ground
9	GND	Ground			
11	GND	Ground	29	GND	Ground
12	GND	Ground	30	GND	Ground
13	GND	Ground	31	GND	Ground
14	N.C.	No connection	32	N.C.	No connection
15	Vo3	1.5V output	33	Vo1	3.3V output
16	Vo3	1.5V output	34	Vo1	3.3V output
17	Vo3	1.5V output	35	Vo1	3.3V output
18	Vo3	1.5V output	36	Vo1	3.3V output

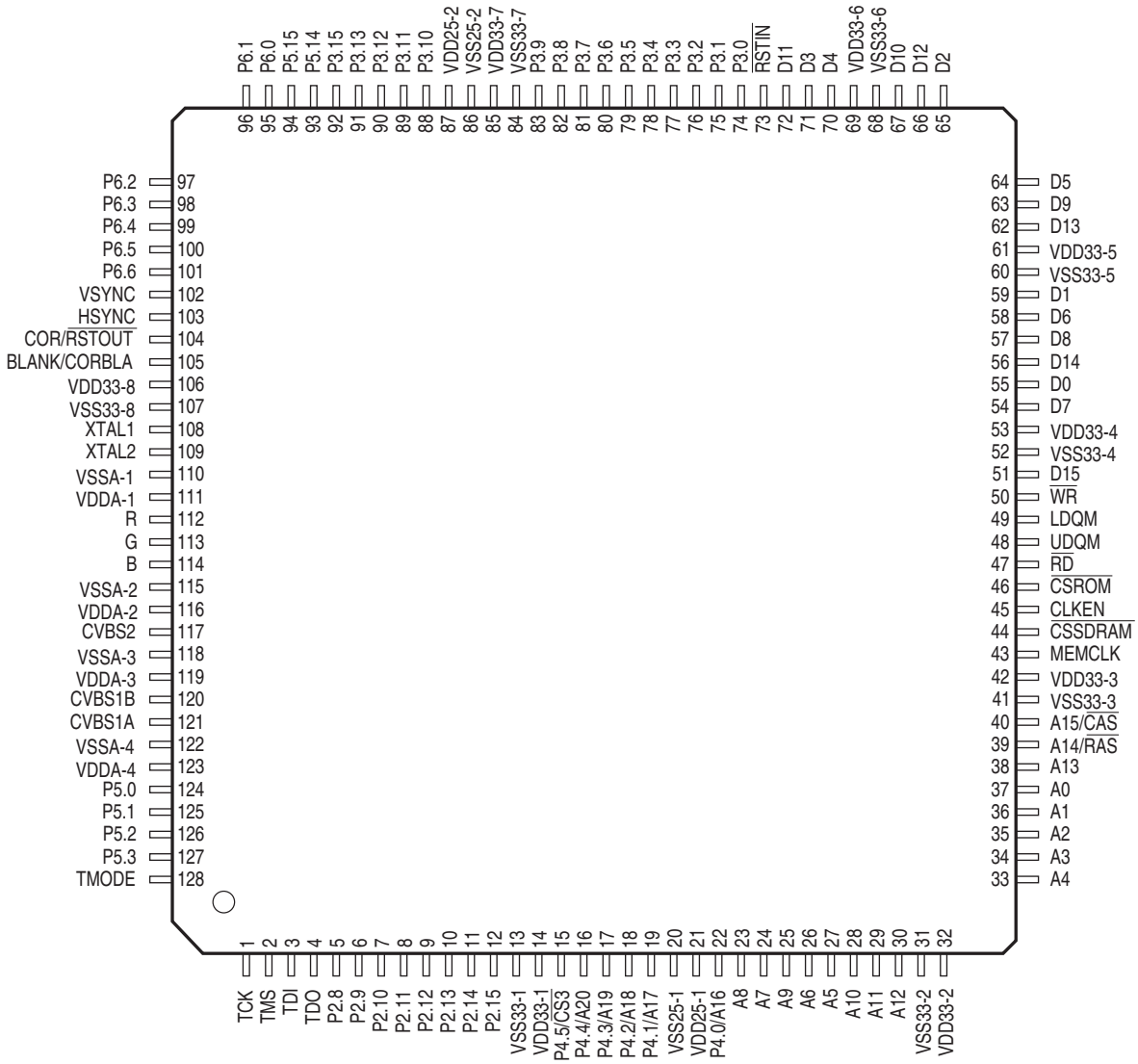
● Schematic Diagram



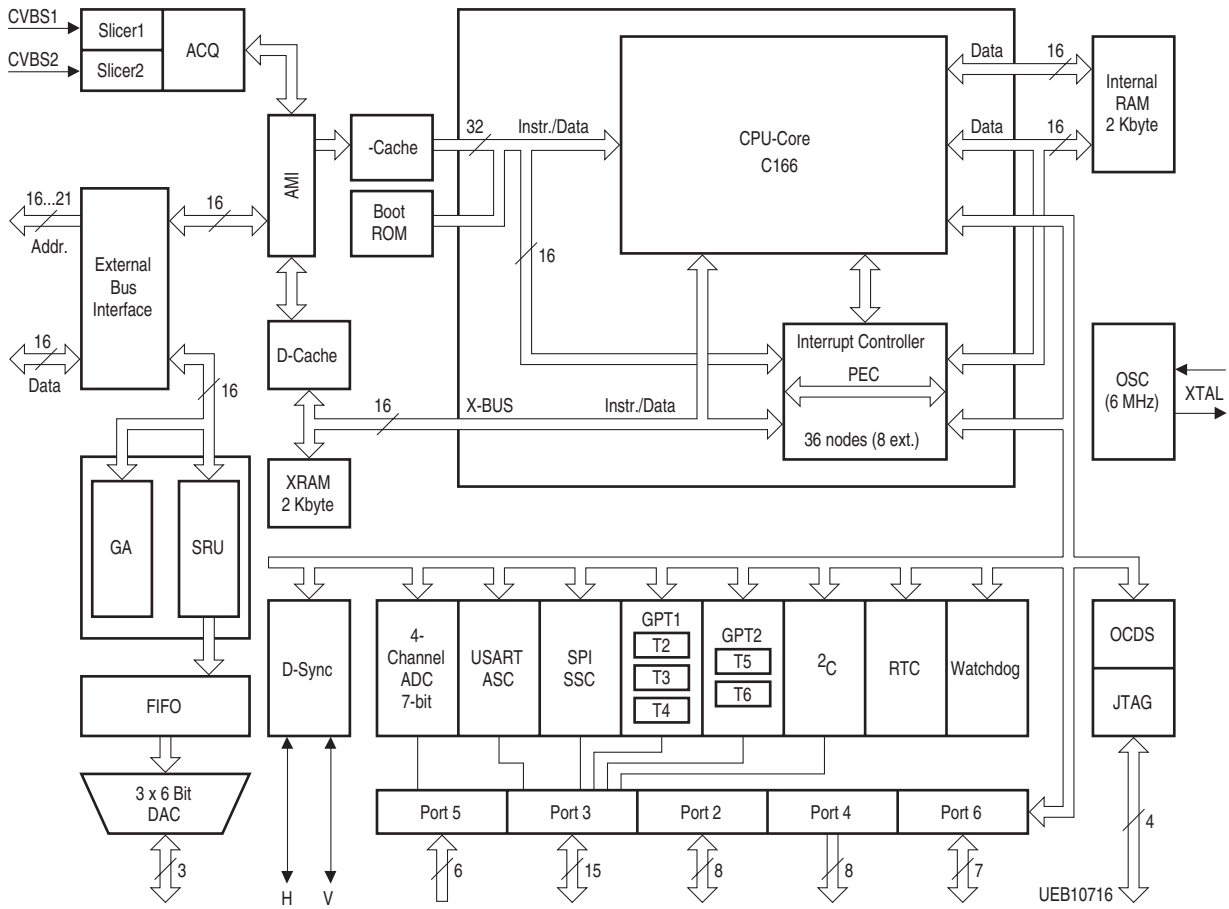
■ SDA6000 (AV BOARD ASSY : IC8904)

• Teletext Decoder

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

No.	Pin Name	Second Function	I/O	Pin Function
1	TCK	–	I	Clock for JTAG interface
2	TMS	–	I	Control signal for JTAG interface
3	TDI	–	I	Data input for JTAG interface
4	TDO	–	O	Data output for JTAG interface
5	P2.8	EX0IN	I/O	General purpose I/O port/External interrupt 0
6	P2.9	EX1IN	I/O	General purpose I/O port/External interrupt 1
7	P2.10	EX2IN	I/O	General purpose I/O port/External interrupt 2
8	P2.11	EX3IN	I/O	General purpose I/O port/External interrupt 3
9	P2.12	EX4IN	I/O	General purpose I/O port/External interrupt 4
10	P2.13	EX5IN	I/O	General purpose I/O port/External interrupt 5
11	P2.14	EX6IN	I/O	General purpose I/O port/External interrupt 6
12	P2.15	EX7IN	I/O	General purpose I/O port/External interrupt 7
13	VSS33-1	–	–	Digital ground for pads
14	VDD33-1	–	–	Digital power (for pads) (3.3 V)
15	P4.5	CS3	O	General purpose output port/Chip select signal for second external static memory
16	P4.4	A20	O	General purpose output port/Address bit
17	P4.3	A19	O	General purpose output port/Address bit
18	P4.2	A18	O	General purpose output port/Address bit
19	P4.1	A17	O	General purpose output port/Address bit
20	VSS25-1	–	–	Digital ground (for digital core)
21	VDD25-1	–	–	Digital power (for digital core) (2.5 V)
22	P4.0	A16	O	General purpose output port/Address bit
23	A8	R8	O	Address bit/SDRAM address bit
24	A7	R7/C7	O	Address bit/SDRAM address bit
25	A9	R9	O	Address bit/SDRAM address bit
26	A6	R6/C6	O	Address bit/SDRAM address bit
27	A5	R5/C5	O	Address bit/SDRAM address bit
28	A10	R10	O	Address bit/SDRAM address bit
29	A11	R11	O	Address bit/SDRAM address bit
30	A12	R12	O	Address bit/SDRAM address bit
31	VSS33-2	–	–	Digital ground for pads
32	VDD33-2	–	–	Digital power (for pads) (3.3 V)
33	A4	R4/C4	O	Address bit/SDRAM address bit
34	A3	R3/C3	O	Address bit/SDRAM address bit
35	A2	R2/C2	O	Address bit/SDRAM address bit
36	A1	R1/C1	O	Address bit/SDRAM address bit
37	A0	R0/C0	O	Address bit (All addresses are word addresses)/SDRAM Address bit
38	A13	R13	O	Address bit/SDRAM address bit
39	A14	$\overline{RAS}$	O	Address bit/Row address strobe for SDRAM access
40	A15	$\overline{CAS}$	O	Address bit/Column address strobe for SDRAM access
41	VSS33-3	–	–	Digital ground for pads
42	VDD33-3	–	–	Digital power (for pads) (3.3 V)
43	MEMCLK	–	O	Clock for SDRAM
44	$\overline{CSSDRAM}$	–	O	Chip select signal for SDRAM device
45	CLKEN	–	O	Enable for memory clock
46	$\overline{CSROM}$	–	O	Chip select signal for ROM device
47	$\overline{RD}$	–	O	External memory read strobe for ROM. $\overline{RD}$ is activated for every external instruction or data read access.
48	UDQM	–	O	Write disable for high byte
49	LDQM	–	O	Write disable for low byte
50	$\overline{WR}$	–	O	Memory write strobe

No.	Pin Name	Second Function	I/O	Pin Function
51	D15	–	I/O	Data bit
52	VSS33-4	–	–	Digital ground for pads
53	VDD33-4	–	–	Digital power (for pads) (3.3 V)
54	D7	–	I/O	Data bit
55	D0	–	I/O	Data bit
56	D14	–	I/O	Data bit
57	D8	–	I/O	Data bit
58	D6	–	I/O	Data bit
59	D1	–	I/O	Data bit
60	VSS33-5	–	–	Digital ground for pads
61	VDD33-5	–	–	Digital power (for pads) (3.3 V)
62	D13	–	I/O	Data bit
63	D9	–	I/O	Data bit
64	D5	–	I/O	Data bit
65	D2	–	I/O	Data bit
66	D12	–	I/O	Data bit
67	D10	–	I/O	Data bit
68	VSS33-6	–	–	Digital ground for pads
69	VDD33-6	–	–	Digital power (for pads) (3.3 V)
70	D4	–	I/O	Data bit
71	D3	–	I/O	Data bit
72	D11	–	I/O	Data bit
73	$\overline{\text{RSTIN}}$	–	I	Reset input pin
74	P3.0	SCL0	I/O	General purpose I/O port/I2C Bus clock line 0
75	P3.1	SDA0	I/O	General purpose I/O port/I2C Bus data line 0
76	P3.2	CAPIN	I/O	General purpose I/O port/GPT2 register CAPREL
77	P3.3	T3OUT	I/O	General purpose I/O port/GPT1 timer T3 toggle
78	P3.4	T3EUD	I/O	General purpose I/O port/GPT1 timer T3 ext. up/down
79	P3.5	T4IN	I/O	General purpose I/O port/GPT1 timer T4 input for count/gate/reload/capture
80	P3.6	T3IN	I/O	General purpose I/O port/GPT1 timer T3 count/gate input
81	P3.7	T2IN	I/O	General purpose I/O port/GPT1 timer T2 input for count/gate/reload/capture
82	P3.8	MRST	I/O	General purpose I/O port/SSC masterreceiver/slave-transmit I/O
83	P3.9	MTSR	I/O	General purpose I/O port/SSC mastertransmit/slave-receiver O/I
84	VSS33-7	–	–	Digital ground for pads
85	VDD33-7	–	–	Digital power (for pads) (3.3 V)
86	VSS25-2	–	–	Digital ground (for digital core)
87	VDD25-2	–	–	Digital power (for digital core) (2.5 V)
88	P3.10	TxD0	I/O	General purpose I/O port/ASC0 clock/data output
89	P3.11	RxD0	I/O	General purpose I/O port/ASC0 data input (asynchronous) or I/O (synchronous).
90	P3.12	–	I/O	General purpose I/O port
91	P3.13	SCLK	I/O	General purpose I/O port/SSC master clock output/slave clock input
92	P3.15	–	I/O	General purpose I/O port
93	P5.14	T4EUD	I/O	General purpose Input port/GPT1 timer T4 ext.up/down ctrl. input
94	P5.15	T2EUD	I/O	General purpose Input port/GPT1 timer T2 ext.up/down ctrl. input
95	P6.0	TRIG_IN	I/O	General purpose I/O port/Trigger input-signal for 'On Chip Debug System' (OCDS)
96	P6.1	TRIG_OUT	I/O	General purpose I/O port/Trigger outputsignal for 'On Chip Debug System' (OCDS)
97	P6.2	FIELD	I/O	General purpose I/O port/Field signal of field detection
98	P6.3	SCL1	I/O	General purpose I/O port/I2C bus clock line 1
99	P6.4	SDA1	I/O	General purpose I/O port/I2C bus data line 1
100	P6.5	–	I/O	General purpose I/O port

No.	Pin Name	Second Function	I/O	Pin Function
101	P6.6	SDA2	I/O	General purpose I/O port/I2C bus data line 2
102	VSYNC	VCS	I/O	Vertical sync In/output/Composite sync output
103	HSYNC	–	I/O	Horizontal sync In/output
104	COR	RSTOUT	O	Output for contrast reduction/Reset output
105	BLANK	CORBLA	O	Fast blanking signal/Three-level signal for contrast reduction + fast blanking
106	VDD33-8	–	–	Digital power (for pads) (3.3 V)
107	VSS33-8	–	–	Digital ground for pads
108	XTAL1	–	I	Input of the oscillator amplifier circuit
109	XTAL2	–	O	Output of the oscillator amplifier circuit
110	VSSA-1	–	–	Analog ground
111	VDDA-1	–	–	Analog power (for PLL and DAC) (2.5 V)
112	R	–	O	Analog output for red channel
113	G	–	O	Analog output for green channel
114	B	–	O	Analog output for blue channel
115	VSSA-2	–	–	Analog ground
116	VDDA-2	–	–	Analog power (for ADCs) (2.5 V)
117	CVBS2	–	I	CVBS signal inputs for WSS data slicing
118	VSSA-3	–	–	Analog ground
119	VDDA-3	–	–	Analog power (for ADCs) (2.5 V)
120	CVBS1B	–	I	Ground for CVBS1A (differential input)
121	CVBS1A	–	I	CVBS signal inputs for full service data slicing
122	VSSA-4	–	–	Analog ground
123	VDDA-4	–	–	Analog power (for ADCs) (2.5 V)
124	P5.0	AN.0	I	General purpose Input port/Analog input for A/D-converter
125	P5.1	AN.1	I	General purpose Input port/Analog input for A/D-converter
126	P5.2	AN.2	I	General purpose Input port/Analog input for A/D-converter
127	P5.3	AN.3	I	General purpose Input port/Analog input for A/D-converter
128	TMODE	–	I	Test mode pin

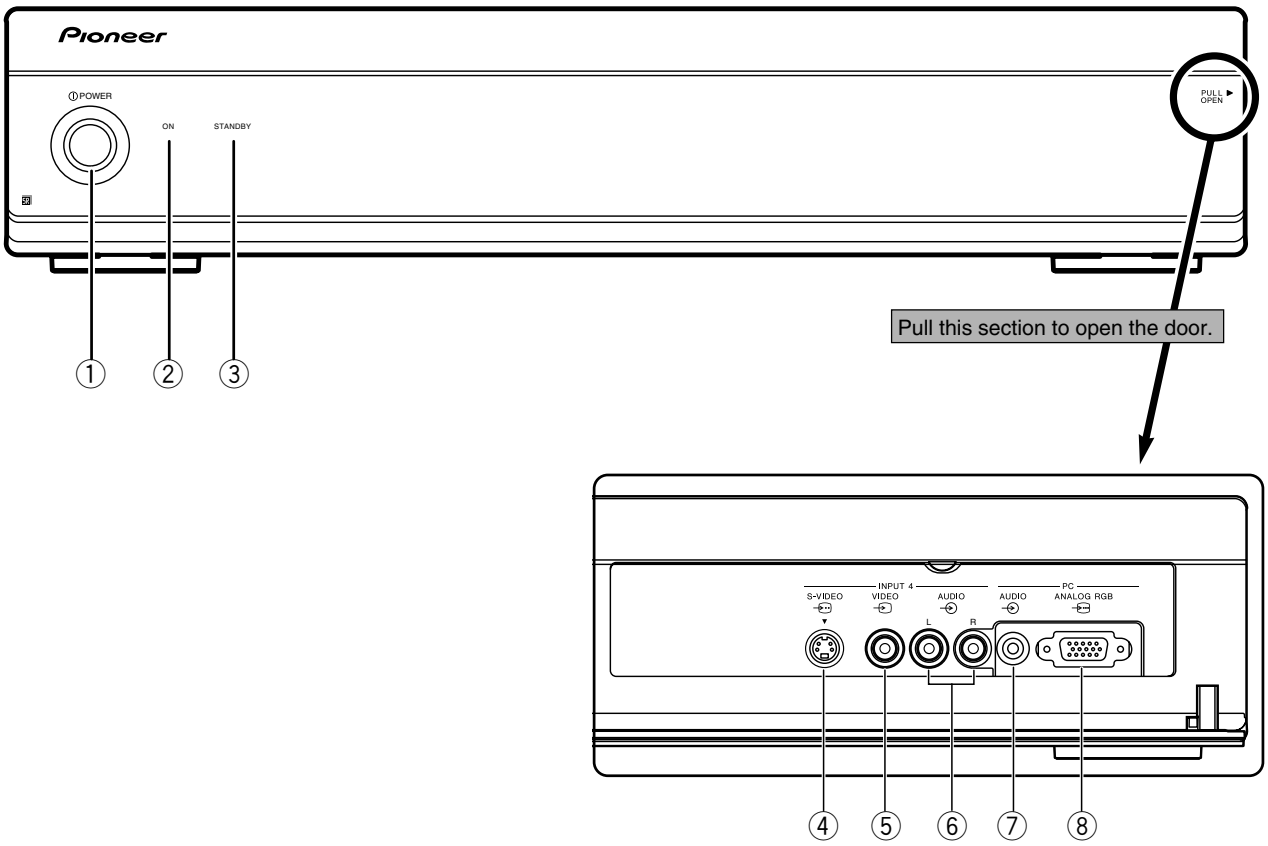
7.4 CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

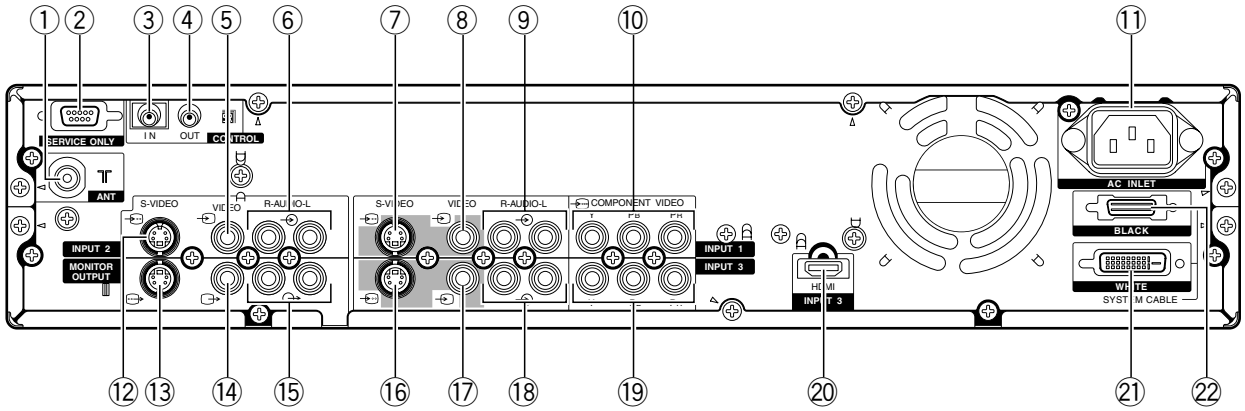
8. PANEL FACILITIES

Front view



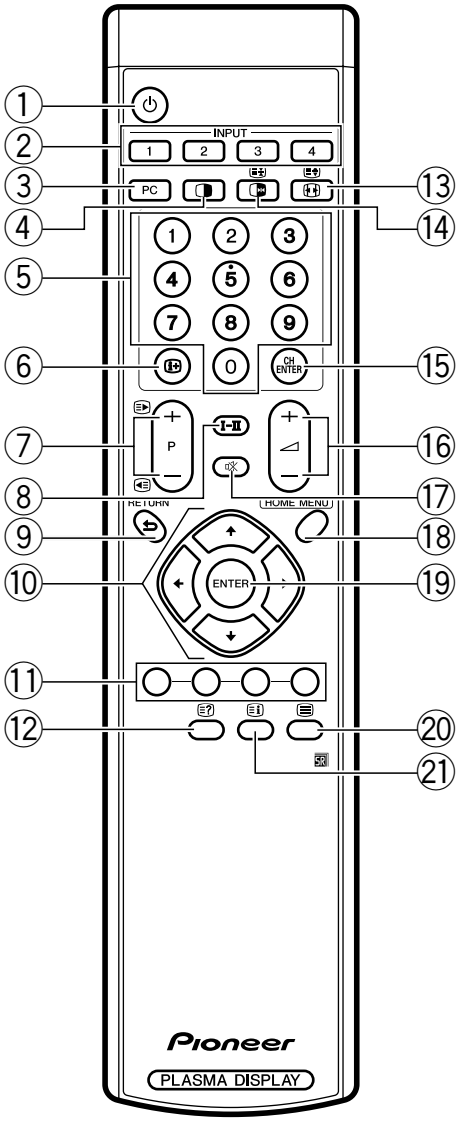
① **POWER** button
② POWER ON indicator
③ STANDBY indicator
④ INPUT 4 terminal (S-VIDEO)
⑤ INPUT 4 terminal (VIDEO)
⑥ INPUT 4 terminals (AUDIO)
⑦ PC INPUT terminal (AUDIO)
⑧ PC INPUT terminal (ANALOG RGB)

Rear view



① Antenna input terminal
② RS-232C terminal (used for factory setup)
③ Control input terminal
④ Control output terminal
⑤ INPUT 2 terminal (VIDEO)
⑥ INPUT 2 terminals (AUDIO)
⑦ INPUT 1 terminal (S-VIDEO)
⑧ INPUT 1 terminal (VIDEO)
⑨ INPUT 1 terminals (AUDIO)
⑩ INPUT 1 COMPONENT VIDEO terminals (Y, PB, PR)
⑪ AC INLET terminal
⑫ INPUT 2 terminal (S-VIDEO)
⑬ MONITOR OUTPUT terminal (S-VIDEO)
⑭ MONITOR OUTPUT terminal (VIDEO)
⑮ MONITOR OUTPUT terminals (AUDIO)
⑯ INPUT 3 terminal (S-VIDEO)
⑰ INPUT 3 terminal (VIDEO)
⑱ INPUT 3 terminals (AUDIO)
⑲ INPUT 3 COMPONENT VIDEO terminals (Y, PB, PR)
⑳ INPUT 3 terminal (HDMI)
㉑ SYSTEM CABLE terminal (WHITE)
㉒ SYSTEM CABLE terminal (BLACK)

Remote control unit



① ⏻
Turns on the power to the Plasma Display or places it into standby mode.

② **INPUT 1, 2, 3, 4**
Selects an input source.

③ **PC**
Selects the PC terminal as an input source.

④ ◑
Switches the screen mode among 2-screen, picture-in-picture, and single-screen.

⑤ **0 – 9**
Switches on the power to the Plasma Display.
TV/External input mode: Selects a channel.
TELETEXT mode: Selects a page.

⑥ i+
Displays the channel information.

⑦ **P + / P –**
TV/External input mode: Selects a channel.
▶/◀
TELETEXT mode: Selects a page.

⑧ **I-II**
Sets the sound multiplex mode.

⑨ ⮌ (RETURN)
Restores the previous menu screen.

⑩ ↑/↓/←/→
Selects a desired item on the setting screen.

⑪ **Color (RED/GREEN/YELLOW/BLUE)**
TELETEXT mode: Selects a page.

⑫ ?
TELETEXT mode: Displays hidden characters.

⑬ ⇔
TV/External input mode: Changes the wide screen size.
⇕
TELETEXT mode: Switches Teletext images. (full/upper half/lower half)

⑭ ⏭
Freezes a frame from a moving image. Press again to cancel the function.
✱
TELETEXT mode: Stops updating Teletext pages. Press again to release the hold mode.

⑮ **CH ENTER**
Executes a channel number.

⑯ ◿+/◿–
Sets the volume.

⑰ 🔇
Mutes the sound.

⑱ **HOME MENU**
TV/External Input mode: Displays the Menu screen.

⑲ **ENTER**
Executes a command.

⑳ ≡
Selects the TELETEXT mode.(all TV image, all TEXT image, TV/TEXT image)

㉑ i
TELETEXT mode: Displays an Index page for the CEEFAX/FLOF format. Displays a TOP Over View page for the TOP format.

NOTE

- When using the remote control unit, point it at the Plasma Display.